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quinn emanuel trial lawyers | washington, dc

1300 I Street NW, Suite 900, Washington, District of Columbia 20005-3314 | TEL (202) 538-8000 FAX (202) 538-8100

WRITER'S EMAIL ADDRESS
josefansorge@quinnemanuel.com

February 5, 2021

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VIA E-MAIL

BRICHARDSON@BSFLLP.COM

Beko Reblitz-Richardson
Boies Schiller Flexner LLP
44 Montgomery St.
41st Floor
San Francisco, CA 94104
Phone 415 293 6804

Re: ***Chasom Brown, et al., v. Google LLC, Case No. 5:20-CV-03664-LHK***

Dear Counsel:

I write on behalf of Google LLC (“Google”) in response to your January 19, 2021 letter regarding paragraph 4(a) of the ESI Order.

Plaintiffs allege they understood certain Google disclosures to mean that when they browsed the Internet in “private browsing” mode while not logged-in to their Google Account, Google would not receive the basic browsing data it collects on behalf of websites to provide Google Analytics and Ad Manager web-services. Thus, Plaintiffs’ claims turn on the narrow issue of how Google’s Privacy Policy and other disclosures may reasonably be interpreted.

Google is fulfilling its preservation obligations. Among other information, Google is preserving data related to the Google Accounts you have indicated are associated with the Named Plaintiffs. That data includes Plaintiffs’ Google Account name, Google Account ID, date of account creation, email address, alternate email address, IP logs that contain IP addresses and User Agents, cookie values related to Plaintiffs’ sign-ins, and My Activity information which would include—depending on user settings and actions—URL information of sites visited and time stamps.

Plaintiffs now ask Google to suspend the regular retention policies of all logs that may record any data from users’ private browsing in the United States. Plaintiffs claim that “it appears

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Google’s February 5, 2021 Ltr. to Plaintiffs’ Counsel

necessary to preserve all logs” of logged-in and logged-out users that may contain data generated during private browsing sessions “so that Plaintiffs can evaluate those logs and other data to assess the best way to identify private browsing mode users and the data collected from their private browsing.” Letter at 5. Google disagrees. Plaintiffs’ request is grossly disproportionate to the needs of the case.

Information About the Logs Implicated By Plaintiffs’ Preservation Demand

Plaintiffs’ preservation demand implicates certain Identity logs, Analytics logs, and Display Ad logs. These logs contain information about user website visits. The Identity logs are linked to a user’s Google Account. The Analytics and Display Ad logs are of two types: either linked to a user’s Google Account (“Google Account keyed logs”) or linked to another identifier (“non-Google Account keyed logs”).

The log data is not reasonably limited by geographic region, by browser, or by browser mode). For that reason, Plaintiffs’ preservation request sweeps in a plethora of data for millions of individuals who are not putative class members. Moreover, the data in Google Account-keyed logs is subject to user controls. At the “My Activity” page, a user can set auto-deletion periods (3 months, 18 months, or 36 months), as well as review and delete individual entries of the data Google received when that user visited a website that used Google services. Those deletion requests are then propagated to the relevant Google Account keyed logs. In addition, the data in the Google Analytics logs is subject to the control of the Google Analytics’ customers on whose behalf Google collects the data.

Suspending the Retention Periods On These Logs Is Not Feasible

First, the sheer size of these logs makes Plaintiffs’ demand unworkable. These logs cover [REDACTED], and include data reflecting the activity of [REDACTED] of users, many of whom are not putative class members. Google estimates that suspending preservation of these logs—even if possible—would result in an additional [REDACTED] of data needing to be stored every thirty days.¹ That would mean that to satisfy Plaintiffs’ demand, every thirty days Google would need to add the equivalent of [REDACTED] laptops to its server space. Further, any suspension of the retention periods is complex—it is not as simple as an on/off switch. The effort involved with suspending the retention periods would entail months of work by teams of engineers. Further, managing this volume of data for the indefinite duration of the litigation would involve hundreds, if not thousands, of hours of engineering work and cost millions of dollars in storage costs alone—which would continue increasing throughout the life of the case. By way of example, the size of one [REDACTED] log for a single 30 day period is [REDACTED]. It defies reason to believe that Plaintiffs will spend the resources necessary to host, manage, review, and actually use in this litigation many multiples of that amount of data.

¹ It would take [REDACTED] to download [REDACTED] over a high-speed gigabit Internet connection.

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Simply put, such substantial costs just for preservation are grossly disproportionate to the needs of a case in which Plaintiffs allege no monetary harm, and where they have yet to articulate a need for all of the data at issue. *See Lord Abbett Mun. Income Fund, Inc. v. Asami*, 2014 WL 5477639, at *3 (N.D. Cal. Oct. 29, 2014) (stating “[t]his district recognizes that the proportionality principle applies to the duty to preserve potential sources of evidence” and holding that requiring a party to continue to pay \$500 per month to store computers outweighed the likely benefit of maintaining the computers.) As explained above, the logs Plaintiffs demand Google preserve are overly inclusive and implicate a substantial amount of information that is irrelevant here because not limited to data associated with users in private browsing mode. A party need not preserve data beyond what is truly “needed to prosecute th[e] case.” *FTC v. DirecTV, Inc.*, 2016 WL 7386133, at *5 (N.D. Cal. Dec. 21, 2016) (no prejudice where although preservation was not perfect, it was sufficient for stated need). Since there is no reason to think that even a fraction of this data will ever be used in litigation, Plaintiffs’ demand that it all be preserved is disproportionate to the needs of the case. N.D. Cal. Guideline 1.03 (proportionality standard set forth in Rule 26(b)(1) applies to preservation of information); see also Fed. R. Civ. P. 37(e) Adv. Comm. Notes (2015) (“[P]erfection in preserving all relevant electronically stored information is often impossible.”). Preservation should not be required here because it is unworkable and Plaintiffs have failed to articulate a need for the information.

The authorities you cite are unavailing because none concerns a preservation burden of even remotely similar magnitude. *See Bright Sols. for Dyslexia, Inc. v. Doe 1*, 2015 WL 5159125, at *3 (N.D. Cal. Sept. 2, 2015) (court-ordered preservation was limited to ***data associated with one Google Account***); *In re Napster, Inc. Copyright Litig.*, 462 F. Supp. 2d 1060, 1067 (N.D. Cal. 2006) (case decided prior to 2015 amendment to the Federal Rules of Civil Procedure introduced “proportionality test”); *National Ass’n of Radiation Survivors v. Turnage*, 115 F.R.D. 543, 557–58 (N.D. Cal. 1987) (same).

Second, the data Plaintiffs are asking Google to preserve is not necessary to Plaintiffs’ claims and therefore not proportional to the needs of the case. Plaintiffs allege that Google identifies and tracks users when they are logged ***out*** of their Google Accounts and in private browsing mode. Compl. ¶ 192 (limiting class to users who browsed in private mode while “not logged into their Google account”). Google has explained that its systems are designed such that data generated by users who are logged out is not linked—or reasonably linkable—to those individuals. Google understands that Plaintiffs wish to test this proposition, but to do so, Plaintiffs do not require—and are not entitled to—all of Google’s website activity data that may be associated with US-based users. It is sufficient for Google to produce information sufficient to show that the data at issue is not linked, and not reasonably linkable, to individual users. Plaintiffs’ requested log data preservation is neither necessary for—or proportional to—showing the data at issue is not reasonably linked to individual users.

Nor would these logs help Plaintiffs identify purported class members. As Google has explained during the meet and confer process, Google does not maintain information to identify whether a user was private browsing. Therefore, contrary to your implicit assumption, there are no

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separate logs of private browsing data that Google then “aggregate[s]” with non-private browsing data. Ltr. at. 3. For the reasons explained in detail in our January 21, 2021 letter, Plaintiffs’ speculation about how they might be able to identify private browsing data in these logs and then link that data to specific users is unfounded and wrong. Ansorge 1/21/21 Ltr. To Richardson at 3-4.

Google is not required to fulfill Plaintiffs’ unreasonable preservation demand simply because Plaintiffs assert—without basis—that all log data, including those from logged-in users, are relevant. *See Am. LegalNet, Inc. v. Davis*, 673 F. Supp. 2d 1063, 1073 (C.D. Cal. 2009) (refusing to issue a preservation order where a preservation of “all information” relevant to the complaint as unduly burdensome); *see also Pettit v. Smith*, 45 F. Supp. 3d 1099, 1107 (D. Ariz. 2014) (“Whether preservation or discovery conduct is acceptable in a case depends on what is *reasonable*, and that in turn depends on whether what was done—or not done—was *proportional* to that case and consistent with clearly established applicable standards.”).

Third, the preservation you demand is unfeasible because it would undermine Google’s compliance with its legal obligations, its public commitment to user privacy, and compliance with its contractual obligations. Google’s procedures and processes are designed to comply with a complex array of applicable data privacy laws and regulations. Similarly, its retention periods and data privacy policies are carefully crafted to abide by Google’s legal obligations under laws in various jurisdictions in which it operates, including EU General Data Protection Regulation 2016/679, the California Consumer Privacy Act (CCPA), and Lei Geral de Proteção de Dados (LGPD). The retention policies at issue here reflect the requirements in these laws and regulations. The logs record data not limited by geographic region, by browser, or by browser mode (synced versus without sync enabled) and therefore implicate data for millions of individuals who are not putative class members. Google’s preservation obligation is not so broad as to compel it to put aside its obligations to respect users’ deletions and our data retention policies for data beyond what is strictly necessary to the litigation.

Beyond its compliance obligations, Google constantly strives to implement strong privacy protections that reflect additional guidance of data protection authorities. Suspending the ability of all U.S.-based users to control the data associated with their accounts would cause Google to run against its representations to users, and is inconsistent with Plaintiffs’ ostensible goal of preserving users’ privacy and control over their data. Similarly, Google maintains and processes data it receives through Google Analytics on behalf of the websites that use Google Analytics. Those websites, just like Google users, have the ability to set retention periods and delete data. Suspending the ability of all Analytics customers—whose websites may have been visited by users in private browsing mode—to delete data that Google stores on Analytics customers’ behalf is unduly burdensome, not proportional to the needs of the case and may be inconsistent with our contractual obligations.

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Google’s Proposal

To resolve this preservation dispute, Google is prepared to preserve data associated with each Plaintiff’s Google Account(s) as recorded in the Identity logs and produce information sufficient to show that the information at issue is not linked, and not reasonably linkable, to specific users.

* * * *

We look forward to continuing to work with Plaintiffs to address and resolve any issues related to discovery in this matter.

Sincerely,

QUINN EMANUEL URQUHART & SULLIVAN, LLP

/s/ Josef Ansorge
Josef Ansorge

cc (via email):
Mark C. Mao, Esq.
Sean P. Rodriguez, Esq.
James Lee, Esq.
Rossana Baeza, Esq.
William S. Carmody, Esq.
Shawn Rabin, Esq.
Steven M. Shepard, Esq.
John A. Yanchunis
Ryan J. McGee

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July 16, 2021

SENT VIA EMAIL

QUINN EMANUEL URQUHART & SULLIVAN, LLP

Diane M. Doolittle
(dianedoolittle@quinnemanuel.com)
Thao Thai (thaothai@quinnemanuel.com)
555 Twin Dolphin Drive, 5th Floor
Redwood Shores, CA 94065

Andrew H. Schapiro
(andrewschapiro@quinnemanuel.com)
191 N. Wacker Drive, Suite 2700
Chicago, IL 60606

Stephen A. Broome
(stephenbroome@quinnemanuel.com)
Viola Trebicka
(violatrebicka@quinnemanuel.com)
865 S. Figueroa Street, 10th Floor
Los Angeles, CA 90017

William A. Burck
(williamburck@quinnemanuel.com)
Josef Ansorge
(josefansorge@quinnemanuel.com)
1300 I Street, N.W., Suite 900
Washington, D.C. 20005

Jonathan Tse
(jonathantse@quinnemanuel.com)
50 California Street, 22nd Floor
San Francisco, CA 94111

Jomaire Crawford
(jomairecrawford@quinnemanuel.com)
51 Madison Avenue, 23rd Floor
New York, NY 10010

**Re: *Chasom Brown, et al., v. Google LLC*, Case No. 5:20-cv-03664-LHK
Google Custodians and Searches**

Dear Counsel,

I write as a follow up to our June 22 letter regarding custodians and searches.

As discussed, Plaintiffs have been reviewing the documents Google produced on June 18, for the first 17 custodians, to identify additional custodians and searches.

Based on that ongoing review, and in addition to the individuals we previously proposed, Plaintiffs have identified a number of other Google employees who should be included as document custodians in this case and certain additional relevant searches.

Included in this letter is a summary of the reasons why Google should include these additional custodians plus specific searches for each of those custodians. We also include in this


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letter, as discussed previously, proposed additional searches for the current custodians and searches for the other proposed additional custodians. We already proposed searches for Mr. Liao, and we are waiting for your response to that proposal.

Please respond to this letter in writing by July 21, so that we can then meet and confer next week regarding these issues. Pursuant to the Court's June 30 order (Dkt. 209), the parties will need to brief any remaining disputes with the August 2 submission.

Plaintiffs are continuing to review Google's productions, and Plaintiffs reserve the right to seek the additional of other custodians and searches.

I. Additional Custodians

Based on our ongoing review of the documents produced by Google and other sources, Plaintiffs identify the following additional custodians with specific proposed searches for each person. Please let us know by July 21 whether Google agrees to add any or all of these individuals and, if so, whether Google will agree to these proposed searches. To the extent Google is unwilling to add any of these individuals and/or searches, please provide us with hit counts.

1. **Alex Ainslie.** Already a custodian in *Calhoun*, documents produced by Google in this case establish that he should also be a custodian in this case. For example, Mr. Ainslie's name is the first name listed on the Q3 2019 "Privacy-Focused Chrome" presentation, which (among other things) discusses the possibility of blocking third-party cookies "by default" in Incognito mode "to measure impact" and the possibility of "[a]lligning users['] expectations of Incognito with what it [Incognito] actually does" such as by adding features such as [REDACTED]. GOOG-BRWN-00165067; *see also* GOOG-BRWN-00165068 (discussing how "'Guest Mode'/'Temporary Mode' doesn't imply anonymity towards websites, Google and ISP and seems more true to what Incognito does today."). This document also discusses the "promise" of anonymity with Incognito. GOOG-BRWN-00165177. Mr. Ainslee is also identified as one of the contributors for a "Chrome Browser: 2019+ Strategy" document, which notes Google's intent to "[a]ddress known problems of Incognito." GOOG-BRWN-00139753. In July 2020, Mr. Mardini sent an email to the Chrome Trust & Safety team announcing changes to Chrome with 3rd-party cookie-blocking in Incognito, and he identified Mr. Ainslie as part of the "Leadership" with that effort. GOOG-BRWN-00189933. In May 2020, Mr. Ainslie also referenced certain Incognito "histograms" (GOOG-BRWN-00233108) and the roll-out of [REDACTED]. GOOG-BRWN-00181901; *see also* GOOG-BRWN-00050100 (Mr. Ainslie comments on modifying Incognito to provide for "3rd party cook[ie] blocking" and considering impact on publishers). Mr. Ainslee was also involved in changes to the Incognito NTP (GOOG-BRWN-00392367) and sent an email titled "Incognito Imprecision" that was critical of Google's public statements regarding Incognito. GOOG-BRWN-00184110. Mr. Ainslee very clearly had (and likely still has) a key role in terms of Google's Incognito efforts, and [REDACTED] included as a custodian.



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Plaintiffs propose the following searches for Mr. Ainslie:

- Incognito¹
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- [REDACTED] OR [REDACTED]
- Histogram!
- (third OR 3rd OR 3d) /3 cookie!
- [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED]

2. **Arne de Booij.** Mr. de Booij has direct personal involvement with Google projects and efforts focused on Incognito, control, transparency, consent, and other relevant issues. One document indicates, for example, that Mr. de Booij stated (correctly) that “[t]here does not seem to be a clear understanding of what incognito does to data collection and who can see what information.” GOOG-BRWN-00164006. Mr. de Booij also sent an email referencing [REDACTED] and asking whether “Chrome Incognito” was interested in “participating in a research immersion” to “learn about Incognito user needs & perceptions” where “consent” would be a topic. GOOG-BRWN-00182236. He also sent an email regarding the PDPO “privacy in context” efforts, focusing on “consent & transparency” and Google’s “transparency & control efforts.” GOOG-BRWN-00220475. He was identified as one of the “Owners” for a project focused on “consent patterns, including to assess user comprehension and user feedback to messaging.” GOOG-BRWN-00222188. Mr. de Booij was also included in discussions regarding Incognito users, including user consent and understanding. *See* GOOG-BRWN-00406075–76 (discussing “what we know about Incognito users” and noting that “Incognito mode is used by [REDACTED] of Chrome users, and [REDACTED] use it at least once per week” and that “[u]sers overestimate the protections that Incognito provides”); GOOG-BRWN-00246549 (discussing studies focused on Incognito but having participants “look at Incognito before asking about expectations for an UnAuth consent”); GOOG-BRWN-00059467 (noting that “incognito also has some overlap with UnAuth”); GOOG-BRWN-00176824, -00176828 (discussing research relating to signed-out users and users that do not use their Google Account and noting that “every incognito window gets a new zwieback”); GOOG-BRWN-00177213 (discussing research involving “incognito with a combined consent”).

Plaintiffs propose the following searches for Mr. de Booij:

- Incognito

¹ Please confirm that “Incognito” from prior searches would have captured “Incognito++.” Otherwise, Plaintiffs request to change the search term “Incognito” to “Incognito!”



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- inPrivate
- Private! /3 (brows! OR mode)
- Consent!
- Unauth! OR “signed out”
- [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED]
- Anonym! OR pseudonymous

3. **Benjamin Poiesz.** During the class period, in 2019, Mr. Poiesz sent an email proposing that Google change Incognito so that it would actually (as promised) “provide anonymity.” GOOG-BRWN-00403704. He has also proposed consideration of changing Google’s business model to a “[r]ev share back to users” based on their data. GOOG-BRWN-00405767. On February 12, 2021, Ane Aranzabal added Mr. Poiesz to an email exchange “for Incognito/PPN” in connection with a “Sundar presentation.” GOOG-BRWN-00220480. This document also discusses Google’s “transparency & control efforts” and the issue of “consent & transparency.” *Id.* Mr. Poiesz has also had a lead role with “PPN & Incognito” and efforts to “better understand rev impact.” GOOG-BRWN-00223134. In 2015, he was identified in connection with “Incognito-fest,” which focused on “the current state of Incognito and developing a shared understanding of where we are.” GOOG-BRWN-00184710. Based on these and other documents, Mr. Poiesz should be included as a custodian.

Plaintiffs propose the following searches for Mr. Poiesz:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- [REDACTED] OR [REDACTED]
- [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED]
- rev! /3 (share OR impact)

4. **Breen Baker.** Mr. Baker has worked at Google since August 2011 as a Product Manager with Google Analytics.² Based on the documents Google produced for other custodians, it appears that Mr. Baker has in-depth knowledge about Google’s cross-device conversions and tracking. *See, e.g.,* GOOG-BRWN-00171370 (discussing Biscotti ID tying); GOOG-BRWN-00170140 (discussing linking of anonymous and user id). His documents are relevant in terms of

² <https://www.linkedin.com/in/breenbaker> [REDACTED]



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understanding Google's use of private browsing data in connection with various Google services and also potentially identifying class members.

Plaintiffs propose the following searches for Mr. Baker:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- Zw! OR biscotti OR cookie!
- conver! OR track!
- Anonym! OR pseudonymous OR unauth!

5. **Brad Townsend.** Already a custodian in *Calhoun*, Mr. Townsend appears to have deep and unique knowledge about Google's collection and tracking of data. For example, in an internal discussion, Dan Stone asks "what tests do we have to ensure that we don't accidentally set/collect the GA 1P cookies when analytics consent is disabled" and then defers that question to Mr. Townsend. GOOG-BRWN-00236984. Mr. Townsend then provided an explanation on how Google's "consent controls are focused on client storage, and we enforce that GA cookies are not read/written client side in the tagging code." *Id.* In a document called "Conversion Tracking in Firefox Private Browsing Mode," Google explains how Firefox's Private Browsing Mode blocks third-party cookies and "most background tracking pings," and therefore breaks Google's "conversion tracking and remarketing collection." GOOG-BRWN-0027314. The study's objective was to "[e]nable conversion tracking on Firefox in Private Browsing mode through a client side fix." *Id.* Mr. Townsend appears throughout the document as someone with knowledge about how to implement that study. See GOOG-BRWN-00027320-22.

Plaintiffs propose the following searches for Mr. Townsend:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- Firefox
- Zw! OR biscotti OR cookie!
- conver! OR track! OR remarket!
- Anonym! OR pseudonymous OR unauth!
- consent!

6. **Chetna Bindra.** Already a custodian in *Calhoun*, Ms. Bindra appears to have unique knowledge about Google's blocking of cookies and use of pseudonymous IDs. For example, she was involved in the launch of [REDACTED], Google's feature that "will start



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blocking third-party cookies in Incognito mode by default.” GOOG-BRWN-00173274–77. *See also* GOOG-BRWN-00062399 (discussing meeting with Ms. Bindra regarding [REDACTED] and “what mocks we can provide for the upcoming Sundar review,” and noting “concern” that Ms. Bindra shared a deck that “promises fundamental changes to Chrome’s Incognito mode”); GOOG-BRWN-00171653 (discussing “Ramp-up Plan for [REDACTED]”). In one Google document, Ms. Bindra expressed concern over a Google statement regarding how “user data associated with pseudonymous ID can be shared with advertising platforms while browsing the web, including which web pages are being visited,” which she described as “going to cause a firestorm.” GOOG-BRWN-00175635. She likely has documents relevant to Google’s tracking and cookie blocking efforts, including with Incognito.

Plaintiffs propose the following searches for Ms. Bindra:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- Zw! OR biscotti OR cookie!
- Anonym! OR pseudonymous OR unauth!
- [REDACTED] OR [REDACTED]

7. **Chris Palmer.** Mr. Palmer appears to have unique knowledge about user confusion regarding Incognito mode. Mr. Palmer’s name appears on the first page of a Google presentation titled “The Incognito Problem” that begins with the “key fact” that “Incognito confuses people” and then proposes solutions, such as “improv[ing] Incognito such that it provides more of what people (both mistakenly, and correctly) expect it does.” GOOG-BRWN-00140297–99, -00140316. In one internal email, Mr. Palmer notes that “[t]he phrase ‘Browse without a trail of cookie crumbs’ makes it sound like maybe Incognito doesn’t support cookies at all, or that it somehow exerts a Do not Track-like behavior on servers,” and is “all so imprecise.” GOOG-BRWN-00184109. Mr. Palmer advocated that Google should “abandon the Incognito name” because “[i]t’s not clear enough.” GOOG-BRWN-00167338. He noted that “I’ve already made my case (for 5 years now)” about this issue. *Id.*

Plaintiffs propose the following searches for Mr. Palmer:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- (User! OR people) /10 confus!
- Track!– [REDACTED] [REDACTED]



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- Cookie!

8. **David Monsees.** Already a custodian in *Calhoun*, the documents produced by Google establish that he should also be a custodian in this case. Not only did Google identify Mr. Monsees as its corporate representative regarding Google data logs in *Calhoun*, with many documents tied to him regarding those logs, he has been involved with various aspect of Incognito. For example, Sammit Adhya included him on an email regarding the June 2019 “Incognito Product Workshop” (GOOG-BRWN-00177764), and Mr. Monsees was identified as someone Rory McClelland should meet as the “PM lead for Footprints and very actively involved in Google’s overall privacy conversations.” GOOG-BRWN-00165704. Mr. Monsees also attended presentations and received emails relating to Sin Rastro and Incognito. GOOG-BRWN-00176982. In July 2020, Mr. Mardini sent an email to the Chrome Trust & Safety team announcing changes to Chrome with 3rd-party cookie-blocking in Incognito, and he identified Mr. Monsees as part of the team contributing to those Chrome-related efforts. GOOG-BRWN-00189933. In December 2020, Mr. Monsees was identified as one of the “Incognito PM Leads” and seeking information about “what it might mean to honor a user’s explicit request for privacy when they turn on Incognito mode.” GOOG-BRWN-00246045.

Plaintiffs propose the following searches for Mr. Monsees:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- [REDACTED] OR [REDACTED]
- [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED]
- [REDACTED]
- “Sin Rastro”
- (user! OR people) /10 (privacy OR consent!)

9. **Deepak Ravichandran.** Already a custodian in *Calhoun*, the documents produced by Google establish that he should also be a custodian in this case. Mr. Ravichandran is Google’s principal engineer for Google Display Ads. He co-authored Google’s 2019 study on the effect of disabling third-party cookies on publisher revenue. GOOG-BRWN-00048286. This is an August 2019 public study where Google acknowledged that disabling third-party cookies would decrease publishers’ revenue by 52% average and 64% median—a serious threat to Google. Plaintiffs are entitled to documents relied on for that study and any communications Google employees and authors of competing studies that Mr. Ravichandran admittedly sought to contact. In another custodian’s production, one email from Mr. Ravichandran is captured referencing revenue impacts from third-party cookie blocking. GOOG-BRWN-00173681. This email pre-dates the May to August 2019 timeframe of that study. Plaintiffs served discovery requests for such documents (RFP Nos. 154, 155), wrote two letters to Google, and notified Google to



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explain the relevance and engage in any reasonable narrowing of the scope of documents sought, but Google has refused any production. Mr. Ravichandran is a senior Google employee for Google Display Ads and intimately involved in Google's determination of the impact blocking third party cookies would have on revenue.

Plaintiffs propose the following searches for Mr. Ravichandran:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- study AND (impact OR revenue OR sustain* OR advertis* OR publish*)
- SameSite
- nitish OR korula
- turtledove
- Zw! OR biscotti OR cookie!
- (user AND profile) AND (publish! OR remarket! OR rmktg)

10. **Dmitry Titov.** Mr. Titov is an Engineering Manager at Google with responsibilities tied to Chrome.³ Mr. Titov's documents are relevant in terms of understanding the development and history of Chrome and Google's data collection. *See, e.g.*, GOOG-BRWN-00109561 (discussion about Incognito profiles being passed to regular browsing mode); GOOG-BRWN-00130258 (changes to whitelists and functions capturing Incognito activity); GOOG-BRWN-00183781 (tracking system-level events while Incognito logged in UMA). Also, Mr. Titov was involved in discussions concerning the representations made in the Chrome Incognito splash screen and revisions detailing whether "private" was an appropriate representation. GOOG-BRWN-00131133. Further, Mr. Titov attended a 2017 Chrome Summit to discuss forthcoming changes to Chrome, including Incognito functions. GOOG-BRWN-00064645-48. Plaintiffs propose the following searches for Mr. Titov:

Plaintiffs propose the following searches for Mr. Titov:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- Zw! OR Biscotti OR cookie!

³ <https://www.linkedin.com/in/dmitrytitov/> [REDACTED]



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- Anonym! OR pseudonymous OR unauth!
- Consent!
- Profile AND brows!
- UMA
- “Chrome Summit”

11. **Florian Uunk.** Mr. Uunk has been a software Engineer at Google since June 2012,⁴ and he appears to have unique knowledge regarding Incognito and the use of cookies in Incognito mode and other Incognito-related issues. For example, he managed projects involving third party cookie blocking in Incognito. GOOG-BRWN-00182804; *see also* GOOG-BRWN-00199591 (reviewing and approving changes regarding user control cookie blocking). In an internal discussion, Mr. Uunk “argue[s] against porting cookies across modes” because it “would be bad for privacy, and negatively surprising in many cases (why do I have stuff in my cart if I go incognito?, why is the stuff that I put in my cart in incognito mode there in regular mode?).” GOOG-BRWN-00183724. In June 2019, Mr. Uunk was chosen to “lead the development of Chrome Privacy features” such as “[redacted] and rethinking Incognito mode.” GOOG-BRWN-00167716. He has also been involved with reading Google histograms to analyze cases where the X-Client-Data header is not sent to Chrome, which includes when “[t]he user is in incognito mode.” GOOG-BRWN-00233093. Those efforts, including [redacted], are highly relevant in this case, and Mr. Uunk should be a custodian.

Plaintiffs propose the following searches for Mr. Uunk:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- Zw! OR biscotti OR cookie!
- Anonym! OR pseudonymous OR unauth!
- [redacted] OR [redacted]
- [redacted] OR [redacted] OR [redacted] OR [redacted] OR [redacted]

12. **Haskell Garon.** Mr. Garon is a Senior Product Manager for Google Cloud. GOOG-BRWN-00023916. According to his LinkedIn, he formerly served as the Senior Product

⁴ <https://de.linkedin.com/in/feuunk> [redacted] [redacted]



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Manager for Sellside Ad Platforms.⁵ Mr. Garon also spent six years managing a team of Product Managers responsible for the roadmap and strategy for third-party monetization of Google's publisher partners on Ad Manager, AdMob, and AdSense in Google's real-time ad exchange. Internal documents reflect that Mr. Garon has knowledge about Google's internal business process and monetization strategies. GOOG-BRWN-00242521. Mr. Garon's documents are relevant in terms of understanding Google's monetization of private browsing information.

Plaintiffs propose the following searches for Mr. Garon:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- (user OR data OR brows!) /25 (monetiz! OR profit! OR revenue)
- [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED]

13. **Hyewon Jun.** Already a custodian in *Calhoun*, the documents produced by Google establish that Ms. Jun should also be a custodian in this case. For example, Ms. Jun has extensive discussions with Google employees regarding restrictions of Google's competitor's browsers like Mozilla Firefox and Microsoft Edge, and how their cookie blocking mechanisms would impact Google's advertising technologies and the substantial revenue Google derived (and continues to derive) from those technologies. GOOG-BRWN-000175565, GOOG-BRWN-00175673–75, GOOG-BRWN-00175744–45. Ms. Jun also was involved in discussions concerning Google's efforts to substitute its tracking technologies from cookies to pixels, and associated those cookie-less technologies with Google's existing user libraries. GOOG-BRWN-00173685; *see also* GOOG-BRWN-00175745. Ms. Jun was (and likely still is) very involved with Google's efforts to determine impacts on its revenue from industry-wide changes to cookie blocking before Google ever launched its own efforts, how to overcome those cookie blocking efforts via the use of cookie-less technologies, and how Chrome could enable those technologies, all of which ties into Google's efforts to continue tracking and monetizing the private browsing of Plaintiffs and putative class members in this case.

Plaintiffs propose the following searches for Ms. Hyewon:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)

⁵ <https://www.linkedin.com/in/haskellgaron/> [REDACTED] [REDACTED]



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- block! AND (impact! OR revenue! OR sustain! OR advertis! OR Mozilla OR Firefox OR Microsoft OR Edge)
- browser AND restrict* AND cookie!
- [REDACTED] OR [REDACTED] OR [REDACTED]
- Zw! OR biscotti OR cookie!
- PPID OR [REDACTED]
- [REDACTED] OR [REDACTED] OR [REDACTED] or [REDACTED] OR [REDACTED]

14. **Lorraine Twohill.** One document identifies Ms. Twohill as a member of a Google “privacy council” and includes her recommendation to “Make Incognito mode truly private,” such as by “turning cookie blocking on by default” and “adding cautionary language at moments like 3P sign-in.” GOOG-BRWN-00406067. She continued: “We are limited in how strongly we can market Incognito because *it’s not truly private*, thus requiring really fuzzy, hedging language that is almost more damaging.” *Id.* (emphasis added). She is also identified as responsible for “Privacy settings” at Google, with the goal to “improve the user experience” and increase “interactions with settings to achieve goals and/or better understand settings.” GOOG-BRWN-00210410; *see also* GOOG-BRWN-00203816 (identifying Ms. Twohill as one “Owner” of effort to making “Google’s approach to privacy clear”). Ms. Twohill is also apparently involved with [REDACTED] with Google acknowledging that “[i]t is no surprise that our users can’t explain what a Google Account is or what it would hold, if it can’t be seen OR is represented schizophrenically as is the case in many of our products today.” GOOG-BRWN-00155368. Despite other documents recognizing that Incognito is not private, this document references Incognito as part of Google’s “privacy controls” for users. *Id.* She was also identified as one of two owners of a “first meeting” with Mr. Pichai with “Incognito mode being one of the topics.” GOOG-BRWN-00184645; *see also* GOOG-BRWN-00185344 (“We’ve received feedback from Sundar and Lorraine that they’d like us to push to have a new Incognito icon ready for the IO announcement”). Ms. Twohill also sent a report on how Google “aggressively promoted Chrome” including demonstrating “Chrome’s incognito mode.” GOOG-BRWN-00229060–61. According to an April 2020 email concerning rebranding Incognito, that effort was “driven by Lorraine [Twohill] who told the PDPO steering committee that Incognito might need rebranding” while Mr. Pichai “didn’t want to put incognito under the spotlight.” GOOG-BRWN-00183088; *see also* GOOG-BRWN-00395008 (“We’ve received feedback from Sundar and Lorraine that they’d like us to push to have a new Incognito icon ready for the IO announcement.”). In May 2020, Ms. Twohill participated in a meeting concerning Incognito mode and “addressed the debate on naming.” GOOG-BRWN-00224176; *see also* GOOG-BRWN-00222952 (“Incognito: Teams in Chrome, Maps, YouTube, and Search have been working with Lorraine’s team and the PDPO on making incognito a more accessible and meaningful part of our privacy foundation”); GOOG-BRWN-00220453 (email concerning Incognito disclosures, with Google employee stating that draft was “overpromising for Chrome’s incognito mode” where also a copy “being reviewed with ... Loarraine”).

[REDACTED]



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Plaintiffs propose the following searches for Ms. Twohill:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- Block! /5 cookie!
- [REDACTED] OR [REDACTED]
- [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED]

15. **Michael Kleber.** Already a custodian in *Calhoun*, the documents produced by Google establish that he should also be a custodian in this case. Mr. Kleber has been a software engineer at Google since 2007. He has communicated with Google employees about identification of Incognito sessions. GOOG-BRWN-00173637. Mr. Kleber is frequently tagged for discussions concerning Google's project [REDACTED], discussing cookie blocking, which is highly relevant in terms of understanding Google's Incognito-focused considerations and changes. GOOG-BRWN-00173305-06; GOOG-BRWN-00199741. Mr. Kleber was also designated as a speaker at Google's 2020 "Tagging Summit," specifically speaking about "The Future of Privacy." GOOG-BRWN-00174567. Further, Mr. Kleber was assigned projects concerning tagging for ad-conversion tracking. GOOG-BRWN-00144542. Mr. Kleber is also very familiar with tracking technologies, acknowledging "there are roughly zero non-Google companies whose tracking depends *only* on [third party] cookies," GOOG-BRWN-00183151, which demonstrates Mr. Kleber's knowledge concerning what other tracking technologies are used to identify individual across the internet.

Plaintiffs propose the following searches for Mr. Kleber:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- Zw! OR biscotti OR cookie!
- Anonym! OR pseudonymous OR unauth!
- Ad! AND conver! AND track!
- Chrome AND conver! AND measure!
- [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED]

16. **Mike Pinkerton.** Mr. Pinkerton is a Senior Staff Software Engineer. GOOG-BRWN-00023911. "In 2018 Pink's team launched version 69 of Chrome iOS as part of the

[REDACTED]



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Chrome 10th Anniversary.”⁶ He has been involved in a Google project aiming to “resolve user misconceptions about what incognito mode offers and what id [sic] does not.” GOOG-BRWN-00181405. In one project regarding user “confusion” about “how to leave incognito,” Mr. Pinkerton suggested that Google instruct users that “[t]o leave incognito, swipe left.” GOOG-BRWN-00181584. He has also discussed how “Dark Mode” may have caused the “increase in Incognito usage.” GOOG-BRWN-00181580. In one document involving the “Chrome 2020 iOS Strategy – iOS Squad,” Mr. Pinkerton asked if “improved settings” are “on our 2020 roadmap” in response to a comment that Google “[i]nvest in a safe and private browsing experience for users (3d party cookie controls, Safe Browsing, improved privacy settings).” GOOG-BRWN-00182207. He has been involved in discussions concerning the development of Google’s toggle that purports to block third-party cookies during Incognito sessions. GOOG-BRWN-00182266. Mr. Pinkerton likely has relevant documents helpful to understanding users’ perceptions of Incognito mode and the development of [REDACTED].

Plaintiffs propose the following searches for Mr. Pinkerton:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- [REDACTED] OR [REDACTED]

17. **Nitish Korula:** Mr. Korula is Google’s Senior Staff Research Scientist for Google Ad Manager. He co-authored Google’s 2019 study on the effect of disabling third-party cookies on publisher revenue. GOOG-BRWN-00048286. This is an August 2019 public study where Google acknowledged that disabling third-party cookies would decrease publishers’ revenue by 52% average and 64% median—a serious threat to Google. Plaintiffs are entitled to documents relied on for that study and any communications Google employees and authors of competing studies that Mr. Korula admittedly sought to contact. GOOG-BRWN-00048288. In another custodian’s production, one email from Mr. Ravichandran—who was the other co-author of this study—is captured referencing revenue impacts from third-party cookie blocking. GOOG-BRWN-00173681. This email pre-dates the May to August 2019 timeframe of that study. Plaintiffs served discovery requests for such documents (RFP Nos. 154, 155), wrote two letters to Google, and have met and conferred with Google to explain the relevance and engage in any reasonable narrowing of the scope of documents sought, but Google has refused any production. Mr. Korula was also involved in two discussions about Google’s cryptic [REDACTED] [REDACTED] GOOG-BRWN-

⁶ https://en.linkfang.org/wiki/Mike_Pinkerton [REDACTED] [REDACTED]



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00171920; GOOG-BRWN-00171947. Mr. Korula is a senior Google employee for Google Ad Manager and is involved in Google's determination of the impact blocking third party cookies would have on revenue, and also building user profiles.

Plaintiffs propose the following searches for Mr. Korula:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- Zw! OR biscotti OR cookie!
- study AND (impact OR revenue OR sustain* OR advertis* OR publish*)
- SameSite
- [REDACTED]
- deepak OR ravichandran
- (user AND profile) AND (publish! OR remarket! OR rmktg)

18. **Othar Hansson.** Mr. Hansson appears to have a core role in Google's Privacy & Data Protection Office with personal involvement in numerous relevant Incognito-related projects and discussions. For example, in one email exchange, Mr. Hansson was questioned about Incognito, and he referenced certain "Incognito logs" kept by Google. GOOG-BRWN-00403751. Another Google employee responded: "The inconsistencies around incognito – to the point that even old-school Googlers often get them wrong are baffling to normal people." *Id.* He is also identified as one of the authors of "Data Transparency I/O Moment" that begins with the acknowledgement that "users do not have a clean mental model for the data that collects about them and how this data *is or is not* used across our products." GOOG-BRWN-00204424. That document identifies Incognito as "likely a billion-user product." On February 12, 2021, Ane Aranzabal added Mr. Hansson to an email exchange "for Incognito/PPN" in connection with a "Sundar presentation." GOOG-BRWN-00220480. This document also discusses Google's "transparency & control efforts" and the issue of "consent & transparency." GOOG-BRWN-00220475. In an email regarding the "Incognito definition," Mr. Hansson commented how "having a simple cross-Google mental model [for Incognito] has value to our users . . . but it's been hard to fully align existing product behavior into a more consistent state," also adding that "[i]t's definitely a bad experience resulting from lack of consistency across our products." GOOG-BRWN-00403753–53. Another document identifies Mr. Hansson as a co-lead of the "Strategic Programs" in Google's Privacy & Data Protection Office. GOOG-BRWN-00071584. Mr. Hansson has also had discussions regarding Google's ability "to distinguish between Incognito and non-Incognito sessions." GOOG-BRWN-00176433. Given his role and these and other documents, Mr. Hansson should be a custodian.

Plaintiffs propose the following searches for Mr. Hansson:

[REDACTED]



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- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- [REDACTED] OR [REDACTED]
- (user OR user's OR users OR data) /5 (transparen! OR control! OR consent!)
- [REDACTED] OR [REDACTED] OR [REDACTED] or [REDACTED] OR [REDACTED]

19. **Qi Dong.** Mr. Dong is a Software Engineer at Google. GOOG-BRWN-00023915. According to his LinkedIn, he worked as an Adwords Statistician for Google from June 2011 to November 2012.⁷ He focused on business analytics, products analytics, modeling, A/B testing and market research. Internal documents demonstrate that Mr. Dong has an expertise in display Ad publication strategies in the context of phasing out third party cookies. GOOG-BRWN-00173430. Internal documents also refer to Mr. Dong as a lead engineer on projects relating to Chrome. GOOG-BRWN-00161318. Mr. Dong likely has relevant documents concerning the technical aspects of Google's collection of private browsing information.

Plaintiffs propose the following searches for Mr. Dong:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- Zw! OR biscotti OR cookie!
- Anonym! OR pseudonymous OR unauth!

20. **Ramin Halavati.** Mr. Halavati has been a Senior Software Engineer at Google since August 2016,⁸ and has been dubbed the "Incognito expert." GOOG-BRWN-00182637. He has been involved, for example, in projects monitoring Incognito users. In one project involving the collection of "granular incognito usage states," Mr. Halavati agreed to consider metrics he described as "borderline," including the "[u]sage of Google products" and other data. GOOG-BRWN-0018539-10. In another project, Mr. Halavati described how "experiment data" was "a means of connecting regular and incognito sessions," and noted that "having more people in the experiment arms reduces the uniqueness of these users." GOOG-BRWN-00168793. Mr.

⁷ <https://www.linkedin.com/in/ilhyvmvm/>

⁸ <https://de.linkedin.com/in/ramin-halavati-81623b2b> [REDACTED]



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Halavati's documents are relevant in terms of understanding Google's collection and use of private browsing information from putative class members.

Plaintiffs propose the following searches for Mr. Halavati:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- (user OR user's OR users OR data) /s (monitor OR dashboard OR metric!)

21. **Rory McClelland.** Mr. McClelland appears to have been deeply involved with the Google [REDACTED] efforts, among other projects. In April 2020, he sent an email to Parisa Tabriz, Alex Ainslie, and Margaret Schmidt with a "roll-out plan for [REDACTED]" which was "the new feature in Incognito mode that will block third-party cookies by default." GOOG-BRWN-00181901-02. He is the one who wrote that [REDACTED]

[REDACTED] and that the "project impact is [REDACTED] (later corrected to [REDACTED]). *Id.* One email identifies Mr. McClelland as one of two "incognito experts." GOOG-BRWN-00182141. He was also involved with discussions regarding "enhanced incognito" with "strong anti-tracking enhancements" (GOOG-BRWN-00388456) and identified as one of two Chrome representatives for the June 2019 "Incognito Product Workshop" (GOOG-BRWN-00177764). In 2018, Mr. McClelland was told that he should "[o]wn Chrome's Incognito" and "determine how it should evolve in light of things like GDPR/ITP/etc." GOOG-BRWN-00165702.

Plaintiffs propose the following searches for Mr. McClelland:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- (third OR 3rd OR 3d) /3 [REDACTED] OR [REDACTED]
- [REDACTED] OR [REDACTED] OR [REDACTED] or [REDACTED] OR [REDACTED]
- track! OR antitrack! OR anti-track!

22. **Sree Pothana.** During his deposition, Glenn Bernston identified Sree Pothana as the person from Google Analytics he interviewed to prepare for the deposition. Bernston Tr. 331:17-331:23. In addition to his experience and knowledge with respect to Google Analytics, Mr. Pothana also appears to have in-depth knowledge about Google's use of identifiers (*e.g.*, GOOG-BRWN-00141411) and Google's logging practices (*e.g.*, GOOG-BRWN-00170877). In an internal document authored by Mr. Pothana, he describes the "[g]oal" of a project as [REDACTED]



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GOOG-BRWN-00141411. In a discussion about “Analytics Data Association,” Mr. Pothana states: [REDACTED] to mitigate the risk, but the risk is still there.” GOOG-BRWN-00170877. These are key issues in this case, and Mr. Pothana’s documents should be produced.

Plaintiffs propose the following searches for Mr. Pothana:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- Identifier! OR “user ID” OR gaia!
- Zw! OR biscotti OR cookie!
- Log! OR plog!
- Anonym! OR pseudonymous OR unauth!

23. **Steve Hamilton.** Mr. Hamilton is a UXR leading efforts focused on Incognito, including efforts focused on “what we know about Incognito users, what they use it for, and some of the risks we’ve identified.” GOOG-BRWN-00406075. That research is relevant in terms of class member identification, liability, and damages, with Mr. Hamilton noting “Incognito mode is used by [REDACTED] of Chrome users” and that “[u]sers overestimate the protections that Incognito provides.” GOOG-BRWN-00406075-76. Mr. Hamilton identified as one of the “Core Team Members” for Sin Rastro focused on “Incognito Research.” GOOG-BRWN-00148736. His name appears on the first page of an internal Google presentation titled “User Needs & Misconceptions Incognito Mode (IM) Across Google.” GOOG-BRWN-00165706. Another email references an “Incognito Misconceptions survey report” from Mr. Hamilton noting “significant confusion” tied to Incognito. GOOG-BRWN-00392406. Mr. Hamilton should be included as a custodian.

Plaintiffs propose the following searches for Mr. Hamilton:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- [REDACTED] OR [REDACTED]
- [REDACTED] OR [REDACTED] OR [REDACTED] or [REDACTED] OR [REDACTED]

24. **Tim Hsieh.** Mr. Hsieh is a Senior Software Engineer at Google who worked on DoubleClick Ad Exchange and Cookie Matcher. Mr. Hsieh helped DoubleClick Ad Exchange connect publishers and advertisers together. [REDACTED] designed, implemented, and launched [REDACTED]



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frameworks to ensure Cookie Matcher complies with various privacy regulations (*e.g.*, GDPR, CCPA, LGPD, and so on). Mr. Hsieh directed Google's efforts to comply with the CCPA and created policy regarding cookies in post-CCPA California. GOOG-BRWN-00245397; GOOG-BRWN-00245558. Mr. Hsieh likely has relevant documents concerning Google's compliance with privacy regulations, which would include compliance regarding the interception and data collection at issue in this case.

Plaintiffs propose the following searches for Mr. Hsieh:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- Cookie! OR DoubleClick
- CCPA OR (privacy /5 (law! OR regulation!))

25. **Vivek Sekhar.** Mr. Sekhar appears to be the lead Product Manager for Google's [REDACTED] project. GOOG-BRWN-00178147. Google characterizes this project as its [REDACTED] starting "by the end of 2020," GOOG-BRWN-00221769. Mr. Sekhar likely has highly relevant and unique documents concerning Google's [REDACTED] project.

Plaintiffs propose the following searches for Mr. Sekhar:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- (third OR 3rd OR 3d) /3 cookie!
- [REDACTED] OR [REDACTED]
- [REDACTED] OR [REDACTED] OR [REDACTED] or [REDACTED] OR [REDACTED]

II. Previously Proposed Custodians

In the interest of compromise, Plaintiffs are willing to drop Jian Qiao as a custodian, provided that Google agree to add the following individuals we previously proposed. We have included additional information and ask that Google reconsider its position.

1. **Benj Azose.** Mr. Azose has worked at Google since 2008, and he currently manages the Product Analyst team for Google Chrome that (according to his LinkedIn profile) is [REDACTED]



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“[f]ocused on understanding Chrome users, improving Chrome’s launch process, defining Chrome’s guiding metrics and reporting on changes in key performance indicators inside and outside of Chrome.” Documents produced by Google show that Mr. Azose has been involved with relevant counting metrics tied to Chrome, with its “Omaha” reporting system and where Chrome (at least for a time) [REDACTED]

[REDACTED] GOOG-BRWN-00168232. In July 2020, after this lawsuit was filed, there was a discussion involving Mr. Azose about “moving this data to UMA and removing it from Omaha.” *Id.* Mr. Azose identified himself as “the analyst decision maker on this.” *Id.* The exchange further discusses “Chrome sending stable IDs to Google domains” that “might allow Google to tie browsing sessions together – without any other technologies such as cookies or users signing in.” *Id.* These are all key issues tied to our ongoing disputes. Mr. Azose also likely has records focused on Incognito metrics. For example, in January 2020, he sent an email containing a report on “Clank users” with a “graph” showing users who “use incognito heavily.” GOOG-BRWN-00233853. In December 2019, he was told that Chrome was “not allowed to launch anything that negatively impacts revenue” and asked for help develop “proxies for revenue” and identifying Incognito as one of the “gaps” in the “ability to measure revenue impact.” GOOG-BRWN-00169228-29. Ms. Azose’s name also appears on the first page of a “chrome staples” presentation containing “Device Actives (Omaha)” and “[REDACTED]” noting a process to “log Omnibox in Incognito.” GOOG-BRWN-00048504; GOOG-BRWN-00048512; GOOG-BRWN-00048517. Mr. Azose also appears to have been involved with discussions regarding “changes in feature use” by Chrome users, including with “Incognito” (GOOG-BRWN-00233473), how websites can “detect being in Incognito” (GOOG-BRWN-00169103; *see also* GOOG-BRWN-00182136), certain Incognito “histograms” (GOOG-BRWN-00233108), how “the X-Client-Data header is currently not sent in Chrome” when the “user is in incognito mode” (GOOG-BRWN-00233093), and how [REDACTED] with other “incognito usage stats” (GOOG-BRWN-00233072). In connection with [REDACTED], Mr. Azose was also asked for “data to measure/estimate incognito traffic in Chrome” (GOOG-BRWN-00233078). Mr. Azose’s key role in evaluating those metrics and revenue impacts, including with Incognito, establish a basis to include him as a custodian.

Plaintiffs propose the following searches for Mr. Azose:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- Omaha OR UMA
- “Identifier! OR UID
- “opt out” OR “opt-out”
- [REDACTED] or [REDACTED]
- (tie OR tying OR link!) /5 (brows! OR session!) [REDACTED]



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- [REDACTED] OR [REDACTED] OR [REDACTED] or [REDACTED] OR [REDACTED]

2. **Nina Ilieva.** As mentioned in our May 21 letter, Ms. Ilieva has been involved with developing Google infrastructures to manage user identity in the ads space, which is relevant to the issue of how Google tracks users' private browsing. For example, according to internal Google documents, Google asked employees to "update our public facing documents that discuss cookies" as "part of our consent improvements for signed out users." GOOG-BRWN-00176119. Ms. Ilieva seems to have been involved with this Google project, which aims to improve "key things," including "help[ing] users understand abstract construct of 'cookies' and how they work." GOOG-BRWN-00176120. She noted that the Ads team was "doing a reclassification of their cookies." GOOG-BRWN-00176119. Google initially refused to make her a custodian (in part) because Ms. Ilieva reported to Greg Fair, a current custodian in this case. *See* Google's May 19 letter. But Google recently clarified that Ms. Ilieva "no longer reports to Mr. Fair." *See* Google's June 21 Letter. Ms. Ilieva likely possesses unique documents concerning user consent in the context of signed out users and should be made a custodian.

Plaintiffs propose the following searches for Ms. Ilieva:

- Incognito
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- Consent!
- Cookie!

3. **Sammit Adhya.** Mr. Adhya appears to have unique knowledge about Google's efforts and users' privacy expectations when it comes to Incognito mode. For example, following "user studies on unauth [sic] transparency/controls," he explained that "part of the challenge we face with both Android and Chrome is the definition of incognito." GOOG-BRWN-00222150. He noted that it "seems clear that users don't have a good sense of identity management," that "[e]ven the most basic questions around sign-in/sign-out state are completely misunderstood," and that "[u]sers have no idea . . . what is happening in their current state in terms of data collection." *Id.* He also asked if Google was "willing to trade data/revenue for user trust and brand reputation," and "[h]ow we want to define incognito/private browsing," including whether Incognito mode is "purely for local privacy" or for "privacy from Google." *Id.* In another internal discussion, Mr. Adhya explained how Google wanted to convey the message to users that if they "want to prevent Google from collecting data," they should be "one step away from that in *any* of our products by using Incognito." GOOG-BRWN-00177525. Mr. Adhya also espoused strong beliefs that Google should simplify, not complicate, its privacy controls, stating users should not require a "cognitive load" to understand and operate those controls. *Id.* Mr. Adhya also acknowledged that there are misconceptions with Incognito and Google should clarify [REDACTED] Google [REDACTED]. And



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in a different internal discussion, Mr. Adhya noted a “search detecting Incognito” issue and remarked, “yikes, doubled down on a promise we don[’t] keep.” GOOG-BRWN-00176480. Mr. Adhya was also involved with discussions about whether Incognito activity is saved in a user’s Google Account. GOOG-BRWN-00212393. Although Mr. Adhya is not a member of Google’s [REDACTED] group/project, he was often encouraged to contact [REDACTED] team members to better understand the project and coordinate. GOOG-BRWN-00177701, GOOG-BRWN-00178147. Further, Mr. Adhya was involved in [REDACTED] and third-party cookie blocking discussions with other internal Google groups. GOOG-BRWN-00177626, GOOG-BRWN-00177764, GOOG-BRWN-00182715.

Plaintiffs propose the following searches for Mr. Adhya:

- Incognito!
- inPrivate
- Private! /3 (brows! OR mode)
- User! /15 (study OR studies OR understand! OR confuse!)
- “Identity management”
- “Sin Rastro” AND (fail* OR review* OR analy*)
- [REDACTED] OR [REDACTED] OR [REDACTED]
- (third OR 3rd OR 3d) /3 cookie*
- Zw* OR Biscotti OR pseudo*
- ePrivacy
- consent* /3 ready
- “summer moment”
- account /3 particle
- [REDACTED] OR [REDACTED] OR [REDACTED] or [REDACTED] OR [REDACTED]

4. **Suneeti Shah Vakharia.** Ms. Vakharia appears to have knowledge about important issues of user consent. She has been involved in developing “plans to improve our signed out user consent” and projects involving Incognito mode like Sin Rastro. GOOG-BRWN-00176804. She has also been tasked with “[p]roviding new users with critical privacy choices during account creation to understand and control the information they share with Google when signed in or when signed out.” GOOG-BRWN-00204666. Ms. Vakharia likely has documents relevant to user consent, an important issue in this case.

Plaintiffs propose the following searches for Ms. Vakharia:

- Incognito!
- inPrivate
- Private! /3 (brows! OR mode) [REDACTED] [REDACTED]



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- OTR OR (off /3 record)
- “Sin Rastro”
- User! /15 (understand! OR confuse!)
- Consent!

5. **Richard Jui-Chieh Hsu.**⁹ Mr. Hsu appears as the main engineer in Google’s [REDACTED] a [REDACTED] related project. GOOG-BRWN-001521201. That project [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] GOOG-BRWN-00152203. Given his engineering role in this Incognito-related project, Mr. Hsu likely has unique and highly relevant documents.

Plaintiffs propose the following searches for Mr. Hsu:

- Incognito!
- inPrivate
- Private! /3 (brows! OR mode)
- OTR OR (off /3 record)
- Zw! OR biscotti OR cookie!
- [REDACTED]

III. PWG Custodians

Aside from the three individuals Google identified, see Google’s June 25 email, we still have not received information about who is part of Google’s Privacy Working Group, including without limitation the Chrome PWG. Please provide that as soon as possible.

IV. Google-Selected and Agreed-To Custodians

Based on our review of Google’s June 18 production, it has become apparent that there are some additional searches needed to identify relevant documents that should be produced. Plaintiffs propose that Google run the following additional searches for the ten Google-Selected

⁹ It’s not clear if “Richard Hsu” (identified in Mr. Bernston’s deposition, see Bernston Tr. at 260:1–260:24) and “Richard Jui-Chieh Hsu” are the same person, based on Google’s June 21 letter, which refused to add Mr. Hsu as a custodian but did not mention whether he is or is not currently employed by Google. Please clarify. [REDACTED]



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Custodians—Glenn Bernston, Deepti Bhatnagar, Sabine Borsay, Greg Fair, Helen Harris, Abdelkarim Mardini, Justin Schuh, Dan Stone, Alexei Svitkine, and Keith Wright, and also to the four agreed-to custodians—Adrienne Porter Felt, Sam Heft-Luthy, Russ Ketchum, and Chris Liao.¹⁰

No.	Search Term	Basis for Adding
1	Eprivacy OR (consent! /3 ready) OR consentless	This search is likely to hit on relevant documents concerning Google's efforts to "move to a consentless ready incognito." GOOG-BRWN-00176943.
2	(summer OR privacy) /2 moment	Google's Summer Privacy Moment was "comprised of privacy and security product announcements," which "[l]anded neutral to positive press coverage across major outlets globally." GOOG-BRWN-00154766. One of Summer Privacy Moment's objectives was to "[s]trengthen Google's position as an industry leader when it comes to data privacy," and included messages on how Google "keep[s] your information private" by providing "[e]asier access to Incognito mode." GOOG-BRWN-00154767; GOOG-BRWN-00154768.
3	██████████ OR ██████████	This search is likely to hit on relevant documents concerning Google's "third party cookie blocking feature in Incognito mode." GOOG-BRWN-00042435.
4	GWS /10 (ID OR identif!)	This search is likely to hit on relevant documents relating to Google's GWS ID, which is used to identify Incognito browsing. GOOG-BRWN-00168636.

¹⁰ Regarding the four agreed-to custodians, the parties are still negotiating their searches. Plaintiffs proposed that Google apply to Ms. Porter Felt, Mr. Heft-Luthy, and Mr. Ketchum the same searches Google applied to the Google-selected custodians, see Plaintiffs' June 22 letter, and for Mr. Liao, Plaintiffs proposed that Google apply a smaller set of searches, see Plaintiffs' July 2 email. The searches identified in this letter are in addition to those proposed searches. Lastly, as a point of clarification, Plaintiffs' June 22 Letter mistakenly referred to the "Court-ordered" custodians, instead of the "Google-selected" custodians, when referring to the searches that Google should apply to Mr. Ketchum.

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ad5	OTR OR (off /3 record)	This search is likely to hit on relevant documents describing Incognito mode. GOOG-BRWN-00193106.
6	████████ OR ██████ OR ██████	This search is likely to hit on relevant documents regarding Google's efforts to gain "user trust and choice." GOOG-BRWN-00150516. ; <i>see also</i> GOOG-BRWN-00205911; GOOG-BRWN-00205913 ("████████" is focused on how "[u]sers should be and feel in control" and how Google should "[b]e transparent about user data collection, storage, and uses" and "[m]ake user choices meaningful and understandable.").
7	GaiaMint OR "Gia Mint"	This search is likely to hit on relevant documents concerning "GaiaMint," a "service that translates credentials into short lived, signed tokens (known as 'mints' or "GaiaMints." GOOG-BRWN-00057046. A GaiaMint is an example of an "authenticator." <i>Id.</i>
8	Zw! OR biscotti OR cookie!	This search is likely to hit on relevant documents concerning Google's use of twice-baked and other relevant cookies.
9	UMA OR "User Metric Analytics"	This search is likely to hit on relevant documents concerning Google's "User Metrics Analytics," which appears to be a back end process for Chrome that logs and syncs Google Chrome usage data.
10	Finch	This search is likely to hit on relevant documents concerning Finch, a "Chrome experiments framework" which is used to "facilitate" the understanding of "the impact of Chrome experiments on user behavior on Google properties." GOOG-BRWN-00051406. Finch is relevant to identifying potential class members.
11	██████	This search is likely to hit on relevant documents concerning "████████," "████████" ████████████████████ ████████████████████ ████████████████████ ████████." GOOG-BRWN-00061091.
12	██████	This search is likely to hit on relevant documents concerning ██████, "████████████████████"



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		[REDACTED] [REDACTED].” GOOG-BRWN-00209131.
13	[REDACTED]	This search is likely to hit on relevant documents concerning “[REDACTED],” which is a [REDACTED],” GOOG-BRWN-00061594, and “[REDACTED],” which is the [REDACTED] GOOG-BRWN-00061915.
14	[REDACTED]	This search is likely to hit on relevant documents concerning Google’s goal to “[s]ystemically improve user privacy protection.” GOOG-BRWN-00150515.
15	X-Client /10 (data OR header OR variation)	This search is relevant in terms of the parties’ ongoing dispute regarding identification of class members, with Google employees admitting that this information can be used to identify Incognito browsing.
16	[REDACTED]	“[REDACTED]” appears to be the codename for a [REDACTED]. <i>See, e.g.,</i> GOOG-BRWN-00152234.

V. Court-Ordered Custodians

Plaintiffs propose that Google apply the following additional searches to six of the seven Court-ordered custodians—Unni Narayanan, Jan Hannemann, Eric Miraglia, Rahul Roy-Chowdhury, Stephan Micklitz, and Brian Rakowski.

No.	Search Term	Basis for Adding
1	[REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] OR [REDACTED] [REDACTED] OR [REDACTED] OR [REDACTED]	As explained above, these appear to be relevant Google codenames, which these custodians may have used.
2	Zw! OR biscotti OR unauth!	This search is necessary to ensure that we capture documents concerning the private browsing data at issue in this case, which Google associates with these identifiers and refers to as unauthenticated or unauth.

BSF

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Sincerely,

A handwritten signature in blue ink, appearing to read "Beko Reblitz-Richardson", with a long horizontal flourish extending to the right.

Beko Reblitz-Richardson

[REDACTED]

EXHIBIT 35
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quinn emanuel trial lawyers | washington, dc

1300 I Street NW, Suite 900, Washington, District of Columbia 20005-3314 | TEL (202) 538-8000 FAX (202) 538-8100

WRITER'S EMAIL ADDRESS
josefansorge@quinnemanuel.com

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October 1, 2021

VIA E-MAIL

Special Master Douglas Brush
(douglas.brush@accelconsulting.llc)
Accel Consulting, LLC

Timothy Schmidt
Accel Consulting, LLC

David A. Straite (dstraite@dicellolevitt.com)
Dicello Levitt Gutzler

Lesley Weaver (lweaver@bfalaw.com)
Bleichmar Fonti & Auld LLP

Jay Barnes (jaybarnes@simmonsfirm.com)
Simmons Hanly Conroy LLC

Re: Google's Submission in Response to Special Master's Request for Technical
Descriptions of Burdens Associated With Providing Requested Information
Calhoun v. Google LLC, 20-cv-05416-LHK (SVK) (N. D. Cal.)

Dear Special Master Brush:

We write in response to your September 30, 2021 request for a technical description of the burdens associated with providing the additional information Plaintiffs have requested. Since Plaintiffs in both cases have already made selections under Step 3, we believe that the technical burdens associated with providing additional information under Steps 1 and 2 are neither proportional, nor required, nor beneficial, to efficiently resolving the disputes currently before the Special Master. *See* Order Following September 30, 2021 Discovery Hearing, Dkt. 329 ("Simply put, each and every transmission, whether or not authorized, neither can nor should be the subject of discovery in this case. Litigation of the size and magnitude of this action requires selection of discovery targets which allow the Parties the opportunity to prove their claims or defenses to a trier of fact within the bounds of Federal Rule of Civil Procedure 26.")

Please do not hesitate to let us know if you would benefit from any additional information or explanatory materials regarding the issues described below.

quinn emanuel urquhart & sullivan, llp

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STUTTGART | SYDNEY | TOKYO | WASHINGTON, DC | ZURICH

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Step 1: Burden of Identifying Every Data Source Potentially Containing Responsive ESI

- Google maintains numerous distinct systems holding “data sources” which could potentially contain responsive ESI. These range from structured key-value storage systems (*e.g.* BigTable and [REDACTED]) to log systems storing data sequentially ([REDACTED]). No single tool exists to query all of these distinct systems and generate a list of all data sources that may contain the specific data at issue in this case. The systems are designed independently for product usage. There is also no single team responsible for all potentially relevant data sources. To compile the requested information, separate subject matter experts for each system were required to identify, analyze, and describe potentially relevant data sources.
- Because individual product teams are responsible for data associated with their products, subject to Google’s policies, experts from different product teams were also required to identify potentially relevant sources.
- Even within a product, Google has many different systems that record log entries for different purposes, ranging from simple debugging to providing enterprise-level reporting to its customers. Teams are functionally differentiated and engineers in any given team will have responsibilities for different tools.
- Some of Google’s log processing systems producing reports for publishers entail configurations (written in [Borg Configuration Language](#)) that list multiple logs. However, these configurations only cover logs processed by that specific pipeline. Listing all potentially relevant logs, even within display ads, requires identifying, contacting, and working with several different teams and experts.

Step 2: Burden of Compiling Field Names

- Google stores its logs records in [protocol buffers](#). Protocol buffers related to the selected log sources are complex and include nested sub-messages that consist of other protocol buffers, that contain further nested sub-messages, and so forth. Each message file contains information about the name, type, identifying field number, and (in some cases) a comment about the field. To save space on disk, a protocol buffer record is encoded in a format in which the fields are identified by tag numbers.
- Because the logs in question have fields and message files from multiple protocol buffer files, Google cannot produce a single “.proto” file, but rather would be required to compile a list of hundreds of files—a complex exercise that will require many software engineering hours. Similar to how C++ compilers can walk through #include statements to produce a binary with all the relevant code and libraries linked in—but there are no readily available tools to reconstruct all the relevant source code that went into that specific binary—proto files import other proto files, using subsections of those files. Moreover, proto files related to the selected data sources are source code: they are submitted as source code, reviewed as source code, and run as source code.

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- A protocol buffer contains all *possible* tags that could contain data. With very few exceptions—such as the limited number fields that have the rarely used “required” tag—there is no requirement for any given field to be filled in. Moreover, it is impossible to enforce the semantics of what a field is used for from product to product, or even record to record. Some protocol buffers, such as those used in ad query logs or frontend logs, are shared across multiple Google products and the vast majority of fields listed therein will contain no data in a given record. For example, many fields pertain only to ads shown on Google’s search page and are irrelevant to ads on third-party websites.
- Providing a list of fields in a proto that are actually filled/used for the data at issue, is also burdensome. Google has no existing tool that provides a listing of populated fields based on a given set of conditions. In theory, Google engineers could create a Flume pipeline to parse each individual record, filter-in matching product/criteria, enumerate the filled fields, and add those to a running set. However, this is a non-trivial program to write, test, submit, and validate. Running this program over more than a handful of recent days would also require significant computer resources, as the potentially relevant log sources are in the hundreds of petabyte range. This list of fields would also contain highly sensitive information related to Google’s ads serving infrastructure and abuse detection, that is irrelevant to this matter and whose disclosure could cause Google substantial economic harm.

Step 2: Burden of Field Descriptions

- The semantics and usage of fields, even in a single data source, change over time, but given the difficulty in updating all references to a given field, names are very rarely changed. Because each product or record may use the same field in a different way, there is no single fixed definition that can be applied to all fields. To ensure that field descriptions are accurate, up to date, and fully capture the current field semantics, each description has to be verified by a team of engineers.
- No readily available tool exists to look up existing comments for a list of fields to create a “dictionary” of field names and comments. To generate the descriptions provided to date under Step 2, Google engineers had to hand copy, review, and verify field descriptions. This laborious process does not scale and is infeasible for multiple sources with thousands of fields.
- There is no single subject matter expert at Google that can, or could, provide descriptions for all data sources, let alone all fields within any given data source. Different subject matter experts are required to provide clear, precise description of fields (or group of fields) in any given context. For many fields, the subject matter expert has to consult additional source code and documentation to understand the logic whereby the field is written or read. On average, it should take a fast, knowledgeable engineer at least five minutes to write and verify a specific field description for a field they understand and use regularly. For

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100 fields, that equates to a full day of work, just for relatively simple fields. Performing code archeology to determine possible changes to these fields or updates to semantics would further greatly increase the effort required. The field descriptions provided so far were generated manually by engineers working long hours, in addition to their usual responsibilities.

Step 3: Running searches on Selected Data Sources

- Google’s logging systems are not designed to facilitate Googlers searching for, or accessing, data for specific individual users. To the contrary, Google’s systems are purposely designed to prevent employees from querying data for specific users. These protections entail additional levels of access-control lists (“ACLs”) on specific fields in logs, including all user identifiers. For any one Googler to be able to access fields that contain raw user identifiers, they must obtain special permissions, and receive approvals from privacy review committees. This process is purposely designed to limit access to sensitive information and it is enforced through a number of technical barriers.
- In addition to the ACLs, publisher configurations, Google policies, and/or legislation require further encryption of identifiers. Many are specifically labelled as DO_NOT_ACCESS_WITHOUT_A_PRIVACY_REVIEW; these fields require privacy reviews and specialized keys (controlled by the privacy reviewers) to gain access. These systems were designed to only allow very specialized code to access. To perform the requested searches at short notice, multiple engineers need to gain permissions, and write this code.
- For debugging purposes, Google maintains 8 days of various logs sources in an optimized format that is queryable by Dremel. (Dremel is a distributed system for quickly querying large datasets. Users write SQL queries that are then executed by Dremel’s execution engine over data stored in a special columnar data format.) Beyond 8 days, the data is stored in a less optimized format to save disc space allowing the logs to be preserved for longer. To query beyond 8 days, Google must use more specialized tooling, such as Flume pipelines, and write custom SQL pipelines that search and process data. (Flume is a framework for executing batch (as opposed to streaming) workloads in parallel over large datasets. Engineers write Flume pipelines in C++ or Java and run these pipelines on Borg to process data. Unlike Dremel, Flume does not require data to be stored in a Columnar format, but it does require significantly more developer time to configure, launch, and tune than a simple Dremel query.) Creating a new search in Flume requires writing C++ scripts and BORG configurations that have to be vetted and submitted for code review.
- Searching across historic log files entails significant computing resources. For example, [REDACTED]
[REDACTED]
[REDACTED]

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We hope this information is helpful and look forward to continuing to work with Plaintiffs and the Special Master to collaboratively resolve the disputes currently before the Special Master.

Respectfully,

QUINN EMANUEL URQUHART & SULLIVAN, LLP

A handwritten signature in black ink, appearing to read "Josef Ansorge". The signature is written in a cursive, flowing style.

Josef Ansorge

JA

EXHIBIT 36
Redacted Version of
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be Sealed



November 9, 2021

SENT VIA EMAIL

QUINN EMANUEL URQUHART & SULLIVAN, LLP

Diane M. Doolittle
(dianedoolittle@quinnemanuel.com)
Thao Thai (thaothai@quinnemanuel.com)
555 Twin Dolphin Drive, 5th Floor
Redwood Shores, CA 94065

Andrew H. Schapiro
(andrewschapiro@quinnemanuel.com)
191 N. Wacker Drive, Suite 2700
Chicago, IL 60606

Stephen A. Broome
(stephenbroome@quinnemanuel.com)
Viola Trebicka
(violatrebicka@quinnemanuel.com)
865 S. Figueroa Street, 10th Floor
Los Angeles, CA 90017

William A. Burck
(williamburck@quinnemanuel.com)
Josef Ansorge
(josefansorge@quinnemanuel.com)
1300 I Street, N.W., Suite 900
Washington, D.C. 20005

Jonathan Tse
(jonathantse@quinnemanuel.com)
50 California Street, 22nd Floor
San Francisco, CA 94111

Jomaire Crawford
(jomairecrawford@quinnemanuel.com)
51 Madison Avenue, 23rd Floor
New York, NY 10010

**Re: *Chasom Brown, et al., v. Google LLC*, Case No. 5:20-cv-03664-LHK
Chris Liao Document Issues**

Dear Counsel,

As the parties have agreed, Plaintiffs will be deposing Chris Liao on December 2 and 3. In connection with that deposition, we have identified certain issues with Google's document productions. In addition to producing earlier-in-time emails, Plaintiffs ask that you please quickly investigate the issues below and produce any additional documents no later than November 23.

For the following documents, please identify (and if they have not already been produced, please produce and identify) the following links:

- GOOG-CABR-03664145: "3M New UUIDs/section"; http://shortn_Bfff6qgAisk"; "some useful queries"; "example"; "Implementation and Rollout Plan: [b/121144670]" "[\[b/159213961\]](#)"; "[\[b/161366859\]](#)".

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- GOOG-CABR-03664108: “see go/zwieback/resident-properties.md for a full treatment”; “for a full inventory see this file”; [b/133456674]”.
- GOOG-CABR-03665840: [REDACTED]
- GOOG-CABR-04706890: “Go/id-filtering”, “go/id-joinability”, “go/id-logging”.
- GOOG-CABR-03664108: “for a full inventory see this file”; “such as described here”, “the standard production build-horizon of 6 months”, and “informational co-diversion in GWS”.
- GOOG-CABR-03665840: “go/display-[REDACTED]”, “go/display-[REDACTED]”, “go/display-[REDACTED]”, “go/display-[REDACTED]”, “go/display-[REDACTED]”, “go/display-[REDACTED]”, “//contentads/identity/[REDACTED]”, “go/pic-gmob-slides”, “go/[REDACTED]”.
- GOOG-CABR-00393660: “go/unified-display-signed-in”
- GOOG-CABR-04205200: “go/[REDACTED]”.
- GOOG-CABR-00547295: “log-based monitoring”, “monitoring and impact analysis”, “here”, “inferred”, “different levels of accuracy”, “input signals”, “go/chromeguard-monitor” “no significant changes in incognito usage”, “(proxy) metrics” for “Search” and “Display”.

From GOOG-CABR-04706890, identified above, please also identify the citations referenced in footnote four.

GOOG-CABR-04695992 includes images and graphs that are illegible in the version produced. Please produce a version in which they are legible, or produce the version of the images and graphs that appear in this document in legible form.

Please respond to this letter by November 16.

Sincerely,

A handwritten signature in black ink, appearing to read "Erika", is placed above the printed name.

Erika Nyborg-Burch

EXHIBIT 39
Redacted Version of
Document Sought to
be Sealed

CONFIDENTIAL

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

---o0o---

CHASOM BROWN, et al.,)
on behalf of themselves and)
all others similarly)
situated,)
Plaintiffs,) Case No.
vs.) 5:20-cv-03664-LHK
GOOGLE LLC,)
Defendant.)
_____)

---o0o---

Videotaped Zoom Deposition of
WING PAN "BERT" LEUNG
CONFIDENTIAL
Friday, March 4, 2022

---o0o---

Katy E. Schmidt
RPR, RMR, CRR, CSR 13096
Veritext Job No.: 5091833

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CONFIDENTIAL

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

---o0o---

CHASOM BROWN, et al.,)
on behalf of themselves and)
all others similarly)
situated,)
)
 Plaintiffs,) Case No.
) 5:20-cv-03664-LHK
vs.)
)
GOOGLE LLC,)
)
 Defendant.)
_____)

BE IT REMEMBERED that, pursuant to Notice, and
on Friday, the 4th day of March, 2022, commencing at the
hour of 9:03 a.m., thereof, in Sunnyvale, California,
before me, KATY E. SCHMIDT, a Certified Shorthand
Reporter in and for the County of Yolo, State of
California, there virtually personally appeared

WING PAN "BERT" LEUNG

called as a witness herein, who, being by me first duly
sworn, was thereupon examined and interrogated as
hereinafter set forth.

Page 2

CONFIDENTIAL

1 APPEARANCES:

2 For The Plaintiffs:

3 (Appeared via Zoom)

4 BLEICHMAR FONTI & AULD LLP

BY: LESLEY WEAVER, Esq.

5 555 12th Street, Suite 1600

Oakland, California 994607

6 415.445.4003

lweaver@bfalaw.com

7 (Appeared via Zoom)

8 BOIES SCHILLER FLEXNER LLP

9 BY: MARK MAO, Esq.

BY: BEKO RICHARDSON, Esq.

10 BY: ERIKA NYBORG-BURCH, Esq.

44 Montgomery Street, 41st Floor

11 San Francisco, California 94104

415.293.6800

12 mmao@bsfllp.com

13 (Appeared via Zoom)

14 MORGAN & MORGAN

BY: RYAN MCGEE, Esq.

15 BY: RYAN YANCHUNIS, Esq.

201 North Franklin Street, Suite 700

16 Tampa, Florida 33602

813.223.0931

17 rmcgee@forthepeople.com

18 (Appeared via Zoom)

19 SUSMAN GODFREY LLP

BY: ALEXANDER FRAWLEY, Esq.

20 BY: AMANDA BONN, Esq.

1900 Avenue Of The Stars, Suite 1400

21 Los Angeles, California 90067-4405

310.789.3131

22 abonnn@susmangodfrey.com

23 ///

24 ///

25 ///

Page 3

CONFIDENTIAL

1 APPEARANCES CONT.:

2 For The Defendants:

3 (Appeared via Zoom)

4 Quinn Emanuel Urquhart & Sullivan LLP

BY: JOSEF ANSORGE, Esq.

5 BY: CARL SPILLY, Esq.

51 Madison Avenue, 22nd Floor

6 New York, New York 10010

212.849.7000

7 josefansorge@quinnemanuel.com

8 Also present:

9 Sean Grant, Videographer

10 Matthew Gubiotti, In-house counsel

11 ---o0o---

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(NOTHING OFFERED.)

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1 BY MR. MAO: 09:22

2 Q. Okay. Have you ever seen this document 09:22

3 before? You may take the time to read it. 09:22

4 A. I'm not aware if I read this before. 09:22

5 Q. Got it. 09:22

6 Do you know whether or not you're going to 09:22

7 appear for an evidentiary hearing on April 21st of this 09:22

8 year? 09:22

9 A. Sorry. Can you repeat the question? 09:22

10 Q. Do you know -- yeah. Right. 09:23

11 Do you know whether or not you're going to 09:23

12 appear for an evidentiary hearing on April 21st of this 09:23

13 year? 09:23

14 MR. ANSORGE: Objection. Vague and 09:23

15 foundation. 09:23

16 THE WITNESS: I'm only aware of there were 09:23

17 initial -- some initial scheduling on February -- end of 09:23

18 February. I forgot which day that I rescheduled. 09:23

19 BY MR. MAO: 09:23

20 Q. So there was scheduling for February of this 09:23

21 year for what? What is it that you're aware of? 09:23

22 A. Deposition. 09:23

23 Q. Depositions. 09:23

24 You mean scheduling of your deposition for 09:23

25 sometime in February of this year? 09:23

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1	A.	As far as I know, that wasn't finalized.	09:23
2	Q.	What was the reason why we didn't take your --	09:24
3		Were you available in February for a	09:24
4		deposition?	09:24
5	MR. ANSORGE:	Objection. Compound.	09:24
6	THE WITNESS:	I mean, what do you mean by	09:24
7		available?	09:24
8	BY MR. MAO:		09:24
9	Q.	Right.	09:24
10		Were you available on February 25th for	09:24
11		deposition of this year?	09:24
12	MR. ANSORGE:	Objection. Vague.	09:24
13	MR. MAO:	Please.	09:24
14	THE WITNESS:	I was working, but I -- I mean,	09:24
15		emergency condition in working, as I'm working on an	09:24
16		engineering emergency for a project, that's not related	09:24
17		to deposition.	09:24
18	BY MR. MAO:		09:24
19	Q.	Got it.	09:24
20		Was that emergency related to this case?	09:24
21	A.	It is not related to this case.	09:24
22	Q.	Do you know about this case? Do you know what	09:24
23		case we're currently in?	09:24
24	MR. ANSORGE:	Objection. Vague.	09:24
25	THE WITNESS:	I have heard something about it.	09:24

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1 BY MR. MAO: 09:25

2 Q. Okay. Have you been keeping up with this 09:25

3 case? 09:25

4 MR. ANSORGE: Objection. Vague. 09:25

5 THE WITNESS: What do you mean by keeping up, 09:25

6 to which detail? 09:25

7 BY MR. MAO: 09:25

8 Q. When were you first brought in by Google to 09:25

9 support the Brown versus Google case, this case on 09:25

10 private browsing? 09:25

11 MR. ANSORGE: Objection. Form. 09:25

12 THE WITNESS: I've heard about a Brown case 09:25

13 probably a year ago or so. I forgot how long. 09:25

14 BY MR. MAO: 09:25

15 Q. Was that in 2021 or 2020 you were first -- you 09:25

16 first heard about the Brown case? 09:25

17 A. I don't recall exactly whether it's 2021 or 09:25

18 2020. Maybe 2020. 09:25

19 Q. Okay. And were you brought in by counsel or 09:25

20 were you brought in within just the Google engineering 09:25

21 team, the team that you were working with Mr. Liao? 09:25

22 MR. ANSORGE: Objection. Form. 09:26

23 And I want to caution the witness to the 09:26

24 extent the question is asking you to reveal privileged 09:26

25 attorney-client communications. Yeah. Please keep 09:26

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1 A. As of that -- possibly those other production 11:54
2 logs -- those existing production logs, that is logs for 11:54
3 likely some ads traffic, and each of the logs I would 11:55
4 assume -- I would expect they would be certain retention 11:55
5 period for each of them. 11:55

6 Q. Okay. So other than looking at the logs, are 11:55
7 there other ways as to how we can tell when the 11:55
8 incognito bit went into production for the purposes of 11:55
9 logs? 11:55

10 MR. ANSORGE: Objection. Form and compound. 11:55

11 THE WITNESS: Can you clarify what do you 11:55
12 mean by this [REDACTED] bit going to 11:55
13 production? Do you mean started the computation, some 11:55
14 production server -- 11:55

15 BY MR. MAO: 11:55

16 Q. You say "We have been logging the fields for a 11:55
17 while"; right? 11:55

18 My question is: How do I know when you 11:55
19 started "been logging the fields for a while?" How do 11:56
20 I tell? 11:56

21 MR. ANSORGE: Objection. Vague. 11:56

22 THE WITNESS: First of all, if I remember 11:56
23 correctly, when I said in that conversation those fields 11:56
24 may be logging for a while, I do not mean to say I know 11:56
25 the start time, the first day those data are being 11:56

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1 available. 11:56

2 And I do not mean those data will still -- all 11:56

3 those data will still keep preserve over the time 11:56

4 because that is control by certain log retention, which 11:56

5 is in force on the log itself, which is not under my 11:57

6 control. 11:57

7 What I mean in that conversation is those 11:57

8 data, which is the output of the -- for the computation, 11:57

9 which include the enum and the [REDACTED] 11:57

10 bit, could be in those production -- could be in some 11:57

11 production logs already at the time that conversation 11:57

12 happened. 11:57

13 BY MR. MAO:

14 Q. Were you ever told to preserve the incognito 11:57

15 bit in these production logs? 11:57

16 MR. ANSORGE: Objection. Vague. 11:57

17 THE WITNESS: Can you -- 11:57

18 BY MR. MAO: 11:57

19 Q. Let me clarify. 11:57

20 Were you ever told for the purposes of this 11:57

21 litigation to retain the logs that contain these 11:57

22 incognito bits? 11:58

23 A. As far as I remember, I was told to retain the 11:58

24 documentation regarding this project. 11:58

25 Q. Were you actually told to retain and preserve 11:58

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1 the data for the purposes of this litigation? 11:58

2 MR. ANSORGE: Here I want to caution the 11:58

3 witness not to reveal attorney-client privileged 11:58

4 communications. 11:58

5 BY MR. MAO: 11:58

6 Q. You may answer. 11:58

7 A. I don't recall -- I'm not entirely sure 11:58

8 whether this is -- this would fall into the privileged 11:58

9 conversation so I probably need to consult the counsel 11:58

10 on this. 11:58

11 Q. Did you have any conversations, other than 11:59

12 with counsel, regarding whether or not data containing 11:59

13 the incognito bit should be preserved? 11:59

14 A. If this is a -- I don't recall the details, 11:59

15 again. As I said, this is just a tiny part of my daily 11:59

16 job. 11:59

17 I would assume, if there are ever any 11:59

18 conversation regarding this litigation and logs being 11:59

19 preserved, it should likely be with the counsel, I would 11:59

20 suppose, which as I said, I'm not entirely sure whether 11:59

21 this would be privileged or not. 11:59

22 Q. So other than with counsel, you do not recall 11:59

23 currently any conversations where you were told to 11:59

24 preserve this data. 11:59

25 Is that correct? 11:59

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1 effort to preserve this data? 12:02

2 I'm not talking about conversations. I just 12:02

3 want to know whether or not you and Google undertook any 12:03

4 efforts to preserve this data? 12:03

5 MR. ANSORGE: Objection. Foundation. Form. 12:03

6 Asked and answered. 12:03

7 THE WITNESS: As far as I can tell -- and 12:03

8 first of all, again, I am not owning the logging 12:03

9 infrastructure, nor defining the retention period. 12:03

10 As far as I'm aware of, I'm not aware of any 12:03

11 change to the retention period of ads logs. 12:03

12 BY MR. MAO: 12:03

13 Q. Who owns the logging retention period for this 12:03

14 project, the part about adding the incognito bit into 12:03

15 the logs? Who would be responsible by Google for that? 12:03

16 MR. ANSORGE: Objection. Compound. 12:03

17 THE WITNESS: This project includes logging 12:03

18 certain outputs into the -- into the production logs. 12:04

19 But as I said earlier, the retention of the 12:04

20 production log, which include other data as well, is not 12:04

21 controlled by this project, nor my team. 12:04

22 BY MR. MAO:

23 Q. Okay. But the changes to the actual fields 12:04

24 here, right, that is owned by your team, isn't it? 12:04

25 MR. ANSORGE: Objection. Vague. 12:04

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1 THE WITNESS: Can you define what do you mean 12:04
2 by those fields? Do you mean the output that I 12:04
3 mentioned earlier? Only the output related to this 12:04
4 project? 12:04
5 BY MR. MAO: 12:04
6 Q. Sure. 12:04
7 The output that you've been logging referred 12:04
8 to in your line here on October 27, 2021, right, the 12:04
9 output in, "We have been logging the fields for a while 12:05
10 already," is that owned by your team? 12:05
11 A. The logic to compute those output and to add 12:05
12 it to production log is only by my team. But the whole 12:05
13 ads log itself and also the whole -- the logging 12:05
14 infrastructure, they are not owned by my team. 12:05
15 Q. Okay. So with regard to the logic that you 12:05
16 own, okay, your team owns, did you take -- undertake any 12:05
17 efforts to preserve, okay, whatever data or 12:05
18 documentation you have as to when the logic changed? 12:05
19 The change in the logic so that you'd be logging these 12:05
20 additional fields or additional output, whatever you 12:06
21 want to call it. 12:06
22 MR. ANSORGE: Objection. Form, and compound. 12:06
23 THE WITNESS: Sorry. I got lost in the 12:06
24 question. Can you repeat your question? 12:06
25 ///

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1 THE WITNESS: First of all, I don't recall 06:04
2 when was the first time that I've been in touch with 06:04
3 those lawyers. 06:04

4 Second, also it's because it's a very long 06:04
5 time ago, I don't even recall the context of that 06:04
6 conversation. 06:04

7 BY MR. MAO: 06:04

8 Q. Were you asked to find out that date in 06:04
9 preparation for this deposition by anybody? 06:04

10 A. I'm not aware of that. 06:04

11 Q. What about for the upcoming hearing, were you 06:04
12 asked by anybody to find out that date? 06:04

13 A. What do you mean by "upcoming hearing"? 06:04

14 Q. The upcoming hearing, were you asked by 06:04
15 anybody to figure out when you received the evidence 06:04
16 preservation letter? 06:04

17 A. So as far as I understand, upcoming hearing 06:04
18 means that doesn't happen yet. I'm not sure what 06:04
19 upcoming hearing you're talking about, so I'm not sure 06:05
20 how to answer your question. 06:05

21 Q. Right. So you're not -- you don't know. 06:05
22 Is that the answer? 06:05

23 MR. ANSORGE: Yeah. Objection. Asked and 06:05
24 answered. 06:05

25 And could I -- could we get a time count, 06:05

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1 please? 06:05

2 THE VIDEOGRAPHER: 6:59. 06:05

3 MR. MAO: I'll pass it to you, Mr. Ansorge. 06:05

4 That's the record I will take. 06:05

5 MR. ANSORGE: Great. Thank you, Mr. Mao. 06:05

6 Thank you, Mr. Leung. 06:05

7 EXAMINATION BY MR. ANSORGE 06:05

8 BY MR. ANSORGE: 06:05

9 Q. Do you recall Mr. Mao asking you a series of 06:05

10 questions about the [REDACTED] bit? 06:05

11 A. Yes. 06:05

12 Q. Why is it called the [REDACTED] 06:05

13 bit? 06:05

14 A. Well, first of all, it's many times that 06:05

15 describing in this deposition is coming from a heuristic 06:05

16 approximation to identify those traffic. 06:05

17 So by adding that [REDACTED] prefix in the field, 06:06

18 make it even more clear that it's not a reliable signal, 06:06

19 it does not mean to be accurate. That's why adding that 06:06

20 prefix will just help to prevent misuse of this 06:06

21 information further by ad engineers. 06:06

22 Q. Is the [REDACTED] bit a signal 06:06

23 that is sent from an instance of the Chrome browser to 06:06

24 Google? 06:06

25 A. No. 06:06

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1 Q. Is the [REDACTED] bit a definitive 06:06
2 or reliable signal to identify incognito mode? 06:06
3 A. No. 06:06
4 Q. Is the [REDACTED] bit a signal the 06:06
5 browser sends to [REDACTED]? 06:06
6 A. No. 06:06
7 Q. Are you aware of [REDACTED] using the 06:06
8 [REDACTED] field bit in any way? 06:06
9 A. I am not aware of any of that. 06:07
10 MR. ANSORGE: No further questions at this 06:07
11 time. 06:07
12 MR. MAO: I have a redirect. 06:07
13 FURTHER EXAMINATION BY MR. MAO 06:07
14 BY MR. MAO: 06:07
15 Q. Are you aware of [REDACTED] using the input which is 06:07
16 relied on by the [REDACTED] bit? 06:07
17 A. Which part of the input you are talking about? 06:07
18 Q. The input that goes into the incognito bit. 06:07
19 A. So as I mentioned earlier, that 06:07
20 [REDACTED] bit, the heuristic approximation 06:07
21 that is coming from more than one input; right? The 06:07
22 user agent, the presence of X-Client-Data header, for 06:07
23 example, I'm aware of user agent being part of the 06:08
24 information passing the [REDACTED], but I'm not aware of the 06:08
25 presence of X-Client-Data header being part of the 06:08

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REPORTER'S CERTIFICATE

---o0o---

STATE OF CALIFORNIA)
) ss.

COUNTY OF YOLO)

I, KATY E. SCHMIDT, a Certified Shorthand
Reporter in and for the State of California, duly
commissioned and a disinterested person, certify:

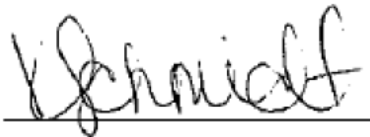
That the foregoing deposition was taken before me
at the time and place herein set forth;

That WING PAN "BERT" LEUNG, the deponent herein,
was put on oath by me;

That the testimony of the witness and all
objections made at the time of the examination were
recorded stenographically by me to the best of my
ability and thereafter transcribed into typewriting;

That the foregoing deposition is a record of the
testimony of the examination.

IN WITNESS WHEREOF, I subscribe my name on this
7th day of March, 2022.



Katy E. Schmidt, RPR, RMR, CRR, CSR 13096
Certified Shorthand Reporter in and for the
County of Sacramento, State of California

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EXHIBIT 40
Redacted Version of
Document Sought to
be Sealed

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

---o0o---

PATRICK CALHOUN, et al.,)
on behalf of themselves and)
all others similarly)
situated,)

Plaintiffs,

)Case No.

)5:20-cv-5146-LHK-SVK

vs.)

GOOGLE LLC,)

Defendant.)

-----)
CHASOM BROWN, et al.,)
on behalf of themselves and)
all others similarly)
situated,)

Plaintiffs,

)Case No.

)5:20-cv-03664-LHK

vs.)

GOOGLE LLC,)

Defendant.)

---o0o---

Videotaped Zoom Deposition of
HUEI-HUNG (CHRIS) LIAO
CONFIDENTIAL, ATTORNEYS' EYES ONLY
Friday, December 3, 2021

---o0o---

Katy E. Schmidt
RPR, RMR, CRR, CSR 13096
Veritext Job No.: 4962198

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

---o0o---

PATRICK CALHOUN, et al.,)
on behalf of themselves and)
all others similarly)
situated,)

Plaintiffs,) Case No.

) 5:20-cv-5146-LHK-SVK

vs.)

GOOGLE LLC,)

Defendant.)

CHASOM BROWN, et al.,)
on behalf of themselves and)
all others similarly)
situated,)

Plaintiffs,) Case No.

) 5:20-cv-03664-LHK

vs.)

GOOGLE LLC,)

Defendant.)

BE IT REMEMBERED that, pursuant to Notice, and
on Friday, the 3rd day of December, 2021, commencing at
the hour of 9:05 a.m., thereof, in Sunnyvale,
California, before me, KATY E. SCHMIDT, a Certified
Shorthand Reporter in and for the County of Yolo, State
of California, there virtually personally appeared
HUEI-HUNG (CHRIS) LIAO
called as a witness herein, who, being by me first duly
sworn, was thereupon examined and interrogated as
hereinafter set forth.

1 APPEARANCES:

2 For The Plaintiffs:

3 (Appeared via Zoom)

4 BLEICHMAR FONTI & AULD LLP

BY: LESLEY WEAVER, Esq.

5 555 12th Street, Suite 1600

Oakland, California 994607

6 415.445.4003

lweaver@bfalaw.com

7 (Appeared via Zoom)

8 SIMMONS HANLY CONROY

9 BY: JASON "JAY" BARNES, Esq.

BY: AN TRUONG, Esq.

10 One Court Street

Alton, Illinois 62002

11 618.693.3104

jaybarnes@simmonsfirm.com

12 (Appeared via Zoom)

13 BOIES SCHILLER FLEXNER LLP

14 BY: MARK MAO, Esq.

BY: BEKO RICHARDSON, Esq.

15 BY: ERIKA NYBORG-BURCH, Esq.

44 Montgomery Street, 41st Floor

16 San Francisco, California 94104

415.293.6800

17 mmao@bsfllp.com

18 For The Defendants:

19 (Appeared via Zoom)

20 Quinn Emanuel Urquhart & Sullivan LLP

BY: JOSEF ANSORGE, Esq.

21 BY: TRACY GAO, Esq.

51 Madison Avenue, 22nd Floor

22 New York, New York 10010

212.849.7000

23 josefansorge@quinnemanuel.com

24 ///

25 ///

1 APPEARANCES CONTINUED:

2 Also present:

3 David West, Videographer

4 Ryan McGee, In-house counsel

5 Toni Baker, In-house counsel

6

---o0o---

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QUESTIONS INSTRUCTED NOT TO ANSWER

Page Line

(NOTHING OFFERED.)

---o0o---

1	A. Okay. I have it.	01:06
2	Q. This looks to me to basically be a variant of	01:06
3	your prior graph, I think.	01:07
4	You could take a look --	01:07
5	A. It appears so.	01:07
6	Q. Yeah.	01:07
7	So my question to you, and I think -- I think	01:07
8	Mr. Barnes asked this, either from this graph or the	01:07
9	graph like you saw before on the other exhibit that was	01:07
10	right below this.	01:07
11	I think my question to you is -- I think --	01:07
12	oh, yes. There, I see it. It's been grayed out.	01:07
13	You see on the top right, right under "Parse	01:07
14	PPID," there's a "Parse privacy req params"?	01:07
15	Again, I might be referring to the wrong one	01:07
16	of two graphs. But I believe that you said that that's	01:07
17	parsing whether or not the incoming signal from the	01:07
18	external world contains a privacy preference or setting	01:07
19	of some type.	01:07
20	Is that -- do I have that right?	01:08
21	MR. ANSORGE: Objection. Mischaracterizes	01:08
22	prior testimony.	01:08
23	THE WITNESS: For the box of "parse privacy	01:08
24	req," which stands for "request," parameters, the	01:08
25	purpose of this piece of logic is to parse the URL	01:08

1 parameters that are related to privacy treatment as we 01:08
2 receive from the URL network request itself. 01:08

3 As I stated yesterday, I believe some of the 01:08
4 examples of such a URL can be, for example, GDPR, which 01:08
5 indicates to our systems that applicable GDPR behaviors 01:08
6 have to be enabled for this particular ad query. 01:08

7 I believe another example I gave was TFCD, 01:08
8 which stands for "treat for child directed." I believe 01:09
9 the presence of the parameter enables our systems to 01:09
10 treat the ad query with the necessary child directed 01:09
11 treatments. 01:09

12 BY MR. MAO:

13 Q. Got it. Got it. 01:09

14 As far as you're aware, amongst these privacy 01:09
15 signals, is there one for incognito mode browsing on 01:09
16 Chrome? 01:09

17 A. No. 01:09

18 Q. Is there a reason that you're aware as to why 01:09
19 that would not be a privacy req parameter for [REDACTED]? 01:09

20 MR. ANSORGE: Objection. Form. 01:09

21 THE WITNESS: I am not aware of a URL 01:09
22 parameter that would indicate incognito mode. 01:09

23 BY MR. MAO: 01:09

24 Q. What about a parameter specifically to signal 01:09
25 to [REDACTED] to parse out that, oh, this is incognito mode 01:09

1 traffic? 01:10

2 A. There is no explicit signal to identify 01:10

3 incognito mode traffic. 01:10

4 Q. Were you ever involved in any discussions on 01:10

5 whether or not [REDACTED] should be designed to receive and 01:10

6 parse such a signal? 01:10

7 A. I was involved in projects having to work with 01:10

8 incognito mode. 01:10

9 Q. Was there a discussion on whether or not that 01:10

10 should be a signal to [REDACTED]? Whether or not that design 01:10

11 should include, you know, a signal to [REDACTED], saying that 01:10

12 the user or device was browsing in incognito mode? 01:10

13 A. I do not recall if there was a specific 01:10

14 discussion around using the URL parameter as a signal 01:10

15 to [REDACTED] to indicate incognito mode. 01:10

16 But as I stated, I was involved in projects 01:11

17 related to incognito mode. 01:11

18 Q. How about amongst those projects that you were 01:11

19 involved, were there any discussions on whether or not 01:11

20 there were any other types of signals other than a URL 01:11

21 parameter signal for incognito traffic that would be 01:11

22 given to [REDACTED] at the -- 01:11

23 MR. ANSORGE: Objection. 01:11

24 MR. MAO: Sorry. It was at the parsing layer, 01:11

25 Ms. Court Reporter. 01:11

1 Yeah. Go ahead, Joey, please. 01:11

2 MR. ANSORGE: Yeah. Objection. Vague. 01:11

3 THE WITNESS: Can you clarify which part of 01:11

4 ████ you're referring to in this question? 01:11

5 BY MR. MAO: 01:11

6 Q. Sure. Sure. 01:11

7 I'm looking at the parsing layer. And my 01:11

8 understanding of that is that that's the first layer 01:11

9 that kind of hits █████ that says, hey, here are all the 01:11

10 signals coming from the external world in which, you 01:11

11 know, like might be relevant, you know, for terms of 01:11

12 ████ digesting and then spitting out whatever it spits 01:11

13 out on the other end. 01:11

14 My question is -- you limited your prior 01:11

15 answers to a URL signal for █████ and you not being aware 01:12

16 of that being a discussion. 01:12

17 My question to you is whether or not you're 01:12

18 aware of a discussion or proposal on a non-URL signal 01:12

19 that would be sent to █████? 01:12

20 A. I do not recall the specifics of such a 01:12

21 discussion. I do not recall if such a discussion -- 01:12

22 specific discussion happened. 01:12

23 But as I stated, I was involved in projects 01:12

24 that have -- have to do with incognito mode. And there 01:12

25 was discussion around proxy signals that we can use to 01:12

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REPORTER'S CERTIFICATE

---o0o---

STATE OF CALIFORNIA)
) ss.

COUNTY OF YOLO)

I, KATY E. SCHMIDT, a Certified Shorthand
Reporter in and for the State of California, duly
commissioned and a disinterested person, certify:

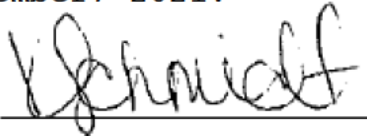
That the foregoing deposition was taken before me
at the time and place herein set forth;

That HUEI-HUNG (CHRIS) LIAO, the deponent herein,
was put on oath by me;

That the testimony of the witness and all
objections made at the time of the examination were
recorded stenographically by me to the best of my
ability and thereafter transcribed into typewriting;

That the foregoing deposition is a record of the
testimony of the examination.

IN WITNESS WHEREOF, I subscribe my name on this
6th day of December, 2021.



Katy E. Schmidt, RPR, RMR, CRR, CSR 13096
Certified Shorthand Reporter
in and for the
County of Sacramento,
State of California

Ref. No. 4962198 KES

EXHIBIT 41
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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

---o0o---

CHASOM BROWN, et al.,)
on behalf of themselves and)
all others similarly)
situated,)

Plaintiffs,) Case No.

) 5:20-cv-03664-LHK

vs.)

GOOGLE LLC,)

Defendant.)

-----)

---o0o---

Videotaped Zoom Deposition of

MANDY LIU

CONFIDENTIAL

Tuesday, March 8, 2022

---o0o---

Katy E. Schmidt
RPR, RMR, CRR, CSR 13096
Job No.: 5121622

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

---o0o---

CHASOM BROWN, et al.,)
on behalf of themselves and)
all others similarly)
situated,)
)
) Plaintiffs,) Case No.
) 5:20-cv-03664-LHK
vs.)
)
GOOGLE LLC,)
)
) Defendant.)
_____)

BE IT REMEMBERED that, pursuant to Notice, and
on Tuesday, the 8th day of March, 2022, commencing at
the hour of 7:01 a.m., thereof, in Kitchener, Ontario,
before me, KATY E. SCHMIDT, a Certified Shorthand
Reporter in and for the County of Yolo, State of
California, there virtually personally appeared

MANDY LIU

called as a witness herein, who, being by me first duly
sworn, was thereupon examined and interrogated as
hereinafter set forth.

CONFIDENTIAL

1 APPEARANCES:

2 For The Plaintiffs:

3 (Appeared via Zoom)

4 BOIES SCHILLER FLEXNER LLP

BY: MARK MAO, Esq.

5 BY: BEKO RICHARDSON, Esq.

44 Montgomery Street, 41st Floor

6 San Francisco, California 94104

415.293.6800

7 mmao@bsfllp.com

8 (Appeared via Zoom)

9 SUSMAN GODFREY LLP

BY: ALEXANDER FRAWLEY, Esq.

10 1301 Avenue Of The Stars, 32nd Floor

New York, New York 10019

11 212.729.2044

afrawley@susmangodfrey.com

12 For The Defendants:

13 (Appeared via Zoom)

14 Quinn Emanuel Urquhart & Sullivan LLP

15 BY: JOSEF ANSORGE, Esq.

BY: CARL SPILLY, Esq.

16 51 Madison Avenue, 22nd Floor

New York, New York 10010

17 212.849.7000

josefansorge@quinnemanuel.com

18 Also present:

19 Sean Grant, Videographer

21 Matthew Gubiotti, In-house counsel

---o0o---

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(NOTHING OFFERED.)

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1 Does that work for you? 09:05

2 THE WITNESS: Yes. 09:05

3 MR. FRAWLEY: Okay. Does that work for you, 09:05

4 Joey? 09:05

5 MR. ANSORGE: Yeah. Just bearing in mind we 09:05

6 got that 1:00 o'clock Special Master thing. 09:05

7 So thank you, Mr. Frawley. Let's go off the 09:05

8 record. 09:05

9 THE VIDEOGRAPHER: Going off the record. The 09:05

10 time is 12:05 p.m. 09:05

11 (Break taken in proceedings.) 09:11

12 THE VIDEOGRAPHER: Back on the record. The 09:12

13 time is 12:12 p.m. 09:12

14 MR. FRAWLEY: Ms. Liu, I don't have any 09:12

15 further questions at this time. 09:12

16 Thank you. 09:12

17 THE WITNESS: Okay. 09:12

18 MR. ANSORGE: I'll have a few. 09:12

19 EXAMINATION BY MR. ANSORGE 09:12

20 BY MR. ANSORGE: 09:12

21 Q. Ms. Liu, could you please pull up Exhibit 4? 09:12

22 A. Yes, I'm -- 09:12

23 Q. Let me know once you have it. 09:12

24 Do you recall Mr. Frawley asking you a series 09:12

25 of questions about this document earlier today? 09:12

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1 recross questions. 09:14

2 FURTHER EXAMINATION BY MR. FRAWLEY 09:14

3 BY MR. FRAWLEY: 09:14

4 Q. So we can stay on this exhibit, Exhibit 4. 09:14

5 Now, Ms. Liu, do you see where you wrote 09:14

6 "e.g., if the browser hasn't received any experiment 09:14

7 config yet"? 09:14

8 A. Yes. 09:14

9 Q. Do you know how often that happens? 09:14

10 MR. ANSORGE: Objection. Vague. 09:14

11 THE WITNESS: No. 09:14

12 BY MR. FRAWLEY: 09:14

13 Q. Did you ever do any research to figure out how 09:14

14 often that happens? 09:14

15 A. No. 09:15

16 Q. Okay. 09:15

17 MR. FRAWLEY: I actually think that's all I 09:15

18 have. 09:15

19 MR. ANSORGE: Thank you. 09:15

20 We're fine with going off the record, 09:15

21 Mr. Frawley, if you are. 09:15

22 And thank you, Ms. Liu. 09:15

23 THE VIDEOGRAPHER: This concludes today's 09:15

24 videotaped deposition of Mandy Liu. We are off the 09:15

25 record at 12:15 p.m. 09:15

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REPORTER'S CERTIFICATE

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STATE OF CALIFORNIA)
) ss.

COUNTY OF YOLO)

I, KATY E. SCHMIDT, a Certified Shorthand
Reporter in and for the State of California, duly
commissioned and a disinterested person, certify:

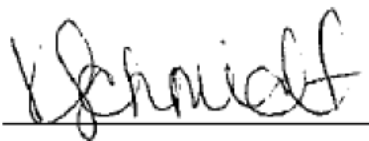
That the foregoing deposition was taken before me
at the time and place herein set forth;

That MANDY LIU, the deponent herein, was put on
oath by me;

That the testimony of the witness and all
objections made at the time of the examination were
recorded stenographically by me to the best of my
ability and thereafter transcribed into typewriting;

That the foregoing deposition is a record of the
testimony of the examination.

IN WITNESS WHEREOF, I subscribe my name on this
8th day of March, 2022.



Katy E. Schmidt, RPR, RMR, CRR, CSR 13096
Certified Shorthand Reporter
in and for the
County of Sacramento,
State of California

Ref. No. 5121622 KES

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EXHIBIT 42
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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

---o0o---

CHASOM BROWN, et al.,)
on behalf of themselves and)
all others similarly)
situated,)

Plaintiffs,) Case No.

) 5:20-cv-03664-LHK

vs.)

GOOGLE LLC,)

Defendant.)

-----)

---o0o---

Videotaped Zoom Deposition of

DR. CAITLIN SADOWSKI

CONFIDENTIAL

Thursday, March 10, 2022

---o0o---

Katy E. Schmidt
RPR, RMR, CRR, CSR 13096
Veritext Job No.: 5130524

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CONFIDENTIAL

IN THE UNITED STATES DISTRICT COURT
 FOR THE NORTHERN DISTRICT OF CALIFORNIA
 SAN JOSE DIVISION

---o0o---

CHASOM BROWN, et al.,)
 on behalf of themselves and)
 all others similarly)
 situated,)
)
 Plaintiffs,)Case No.
)5:20-cv-03664-LHK
 vs.)
)
 GOOGLE LLC,)
)
)
 Defendant.)
 _____)

BE IT REMEMBERED that, pursuant to Notice, and
 on Thursday, the 10th day of March, 2022, commencing at
 the hour of 3:37 p.m., thereof, in Mountain View,
 California, before me, KATY E. SCHMIDT, a Certified
 Shorthand Reporter in and for the County of Yolo, State
 of California, there virtually personally appeared

DR. CAITLIN SADOWSKI

called as a witness herein, who, being by me first duly
 sworn, was thereupon examined and interrogated as
 hereinafter set forth.

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CONFIDENTIAL

1 APPEARANCES:

2 For The Plaintiffs:

3 (Appeared via Zoom)

4 BOIES SCHILLER FLEXNER LLP

BY: MARK MAO, Esq.

5 BY: BEKO RICHARDSON, Esq.

44 Montgomery Street, 41st Floor

6 San Francisco, California 94104

415.293.6800

7 mmao@bsfllp.com

8 (Appeared via Zoom)

9 MORGAN & MORGAN

BY: RYAN MCGEE, Esq.

10 201 North Franklin Street, Suite 700

Tampa, Florida 33602

11 813.223.0931

rmcgee@forthepeople.com

12 For The Defendants:

13 (Appeared via Zoom)

14 QUINN EMANUEL URQUHART & SULLIVAN LLP

15 BY: JOSEF ANSORGE, Esq.

51 Madison Avenue, 22nd Floor

16 New York, New York 10010

212.849.7000

17 josefansorge@quinnemanuel.com

18 Also present:

19 Chad Given, Videographer

20 Toni Baker, In-house counsel

21 ---o0o---

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Examination by Mr. McGee

08

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QUESTIONS INSTRUCTED NOT TO ANSWER

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(NOTHING OFFERED.)

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1 so I -- part of it cut off. 05:57

2 Q. Sure. 05:57

3 I'm asking -- let me mute my computer -- your 05:57

4 colleagues were e-mailing me. 05:57

5 The [REDACTED] 05:57

6 [REDACTED], you said that it's not GAIA keyed. 05:57

7 What do you mean by that? 05:58

8 A. I did not say that [REDACTED] 05:58

9 [REDACTED] is 05:58

10 not GAIA keyed. You had asked about [REDACTED] logs. 05:58

11 Q. Okay. Let me just then back it up. 05:58

12 On your information sheet, Notice 2, Topic 10, 05:58

13 there are -- there appear to be two field names or -- 05:58

14 let me back it up so we're speaking the same language. 05:58

15 What would you consider the [REDACTED] 05:58

16 [REDACTED] -- how -- 05:58

17 what -- how would someone at Google describe that? Is 05:58

18 it a field? Is it a field name? Is it a bit? I'm 05:59

19 trying to understand that. What's the jargon that 05:59

20 someone at Google would use to refer to those? 05:59

21 MR. ANSORGE: Objection. Compound. 05:59

22 THE WITNESS: I think there are many different 05:59

23 ways someone at Google might use to refer to those. 05:59

24 There is multiple jargon we could call it. 05:59

25 So I would say that [REDACTED] 05:59

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1 [REDACTED] is 05:59
2 a binary field that is specifically used only in temp 05:59
3 [REDACTED] logs. 05:59
4 BY MR. MCGEE: 05:59
5 Q. And why is it only in temp [REDACTED] logs? 05:59
6 A. It was a field that was created by the [REDACTED] 06:00
7 team to help them understand potential problems with 06:00
8 their product location and where searching so that they 06:00
9 could develop the best product possible for Google 06:00
10 users. 06:00
11 Q. Okay. And it -- there's a note here that it 06:00
12 was introduced in 2017, but then the project wrapped up 06:00
13 in June of 2018. 06:00
14 Is that binary field still implemented at 06:00
15 Google? 06:00
16 MR. ANSORGE: Objection. Vague. 06:00
17 THE WITNESS: That binary field is -- still 06:00
18 exists as a binary field in and only in [REDACTED] logs. 06:00
19 BY MR. MCGEE: 06:01
20 Q. Are values written to that binary field in 06:01
21 [REDACTED] logs? 06:01
22 A. Yes. I believe values are written to that 06:01
23 binary field in [REDACTED] logs. 06:01
24 Q. So even though the project wrapped in June of 06:01
25 2018, that is still an actively used binary field? 06:01

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1 MR. ANSORGE: Objection. Form. 06:01

2 THE WITNESS: As I understand it, it is not 06:01

3 actively used. It is still being written. It is not 06:01

4 being reviewed. 06:01

5 BY MR. MCGEE: 06:01

6 Q. Can you please clarify what you mean by "not 06:01

7 being reviewed"? 06:01

8 A. So from talking to Quentin, this field went 06:02

9 into a particular dashboard that the [REDACTED] team used 06:02

10 to identify situations where they are not getting a 06:02

11 location header but should be getting a location header. 06:02

12 And if a -- in situations where an X-Client-Data header 06:02

13 is not sent, they would also expect a location header to 06:02

14 not be sent in most situations like that. 06:02

15 So if there is an X-Client-Data header but 06:02

16 there's no location header, then that's potentially 06:02

17 indicative of a bug in the system. 06:02

18 So they have a dashboard that shows, you know, 06:02

19 how often that occurs and they could look at to, you 06:02

20 know, minimize the amount of times where a location 06:02

21 header should be sent but isn't sent. And they use that 06:03

22 dashboard to improve the product in this 2017-2018 time 06:03

23 range. 06:03

24 And from talking to Quentin, my understanding 06:03

25 is there's -- they're not actually looking at that 06:03

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1 particular graph anymore in the normal course of 06:03
2 operations for the team. 06:03
3 Q. But if they pulled up the graph, there would 06:03
4 be responsive data that would fill in the graph; 06:03
5 correct? 06:03
6 MR. ANSORGE: Objection. Vague, and calls for 06:03
7 a legal conclusion. 06:03
8 THE WITNESS: I don't know what you mean by 06:03
9 responsive data that would fill in the graph. 06:03
10 BY MR. MCGEE: 06:03
11 Q. Sure. 06:03
12 So you're saying they aren't looking at the 06:03
13 graph anymore. They're not reviewing it. 06:03
14 What I'm asking is: Is if they did pull up 06:04
15 the graph, the graph would still have lines or bars or 06:04
16 whatever visual representation or graphical 06:04
17 representation the graph was designed to display. 06:04
18 Is that fair? 06:04
19 MR. ANSORGE: Objection. Compound. Form. 06:04
20 THE WITNESS: My understanding is that [REDACTED] 06:04
21 [REDACTED] 06:04
22 [REDACTED] is a field that is being filled in in 06:04
23 UMA -- not UMA -- not in UMA logs. It is not in UMA 06:04
24 logs, to be clear. It is only in [REDACTED] logs. And it 06:04
25 is a field that is still being filled in in [REDACTED] logs 06:04

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1 today, despite the fact that the reason the field was 06:04
2 introduced has passed. 06:04
3 BY MR. MCGEE: 06:05
4 Q. Okay. And from your fact sheet, the 06:05
5 [REDACTED] 06:05
6 [REDACTED] -- so without the [REDACTED] -- 06:05
7 THE COURT REPORTER: I'm so sorry, Counsel. 06:05
8 Can you start that question over? There was a little 06:05
9 bit of feedback. I didn't get it. 06:05
10 MR. MCGEE: Sure. 06:05
11 BY MR. MCGEE:
12 Q. So the -- you've got two bullet points in your 06:05
13 fact sheet. 06:05
14 One is the [REDACTED] 06:05
15 [REDACTED], no GAIA. 06:05
16 What does that mean? 06:05
17 A. What that means is that the -- these [REDACTED] 06:05
18 logs that have this field set are not GAIA keyed. They 06:05
19 have location information. And then this is a Boolean 06:05
20 field, so it would be true or false. And there's the 06:06
21 location information, plus the Boolean field in the 06:06
22 [REDACTED] temp logs. 06:06
23 Q. Got it. 06:06
24 A. And not -- notably not GAIA IDs. 06:06
25 Q. Understood. 06:06

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1 combine this with UMA data. 06:08

2 MR. MCGEE: I think we've been going for about 06:08

3 40 minutes now. I just need to take a break so -- 06:08

4 MR. ANSORGE: Yeah. I'm fine with that. 06:08

5 Could we get a time count as well? How much 06:08

6 time is left on the record? 06:08

7 THE VIDEOGRAPHER: Yeah. So off the record? 06:08

8 MR. MCGEE: Yes. Off the record. 06:08

9 THE VIDEOGRAPHER: Okay. We're now going off 06:08

10 the record. The time is 6:08 p.m. 06:08

11 (Break taken in proceedings.) 06:17

12 THE VIDEOGRAPHER: We are now back on the 06:17

13 record. The time is 6:18 p.m. 06:17

14 BY MR. MCGEE: 06:18

15 Q. Dr. Sadowski, for the bits that we were -- or 06:18

16 excuse me -- the binary fields that we were just talking 06:18

17 about, the [REDACTED] 06:18

18 [REDACTED], [REDACTED] 06:18

19 [REDACTED], and 06:18

20 [REDACTED], do you know 06:18

21 what logic is being used to derive the values that are 06:18

22 stored in those binary fields? 06:18

23 MR. ANSORGE: Objection. Vague and compound. 06:18

24 THE WITNESS: I believe the [REDACTED] 06:18

25 [REDACTED] is referring 06:18

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1 to the same thing as [REDACTED] 06:18

2 [REDACTED]. I do know about 06:18

3 how that field is filled in. 06:19

4 BY MR. MCGEE: 06:19

5 Q. Okay. And what's the logic for filling in 06:19

6 that field? 06:19

7 A. It looks specifically at whether there is an 06:19

8 X-Client -- X hyphen Client hyphen Data header in the 06:19

9 request that is sent. 06:19

10 Q. Is there any other thing that it looks for or 06:19

11 is that all that it looks for? 06:19

12 A. I believe that is all that it looks for. The 06:19

13 [REDACTED] 06:19

14 [REDACTED] is if there is a X-Client-Data -- 06:19

15 X-Client-Data header sent, then that is the logic used 06:20

16 to set that to true. 06:20

17 This is a proxy for incognito, but it is not 06:20

18 a what I would call a reliable or accurate way to 06:20

19 determine incognito usage. 06:20

20 Q. Okay. And what's the -- what types of traffic 06:20

21 is this logic being applied to? Is it mobile traffic? 06:20

22 Is it -- you know, is it platform specific? 06:20

23 MR. ANSORGE: Objection. Vague and compound. 06:20

24 THE WITNESS: It is in [REDACTED] logs which are 06:21

25 [REDACTED]. I believe it will be 06:21

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1 cross-platform, but I do not know for certain. I would 06:21
2 have to investigate. 06:21
3 BY MR. MCGEE:
4 Q. Who would you speak with at Google to 06:21
5 investigate that? 06:21
6 A. I would speak again with Quentin Fiard if I 06:21
7 had a question about the -- this particular field in 06:21
8 [REDACTED] logs. 06:21
9 Q. Okay. And then I did this backwards but -- 06:21
10 apologies. 06:21
11 I can -- I've introduced two new exhibits. 06:21
12 They're going to be 16 and 15. 06:22
13 (Plaintiffs' Exhibits 15 and 16 06:22
14 were marked for identification.) 06:22
15 BY MR. MCGEE: 06:22
16 Q. But I'd actually like you to look at 16 first. 06:22
17 A. 16 first? Okay. I'm waiting for it to load. 06:22
18 Q. Thank you. 06:22
19 A. One other thing to answer your question. 06:22
20 To the best of my knowledge the [REDACTED] 06:22
21 [REDACTED] field is derived from the 06:22
22 [REDACTED] 06:22
23 [REDACTED]. It is still depending on X-Client-Data 06:22
24 header logic and also looking at the user agent, but it 06:22
25 is not derived through some other mechanism than 06:22

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CONFIDENTIAL

1 results; right? 06:48

2 A. Yes. If you search for [REDACTED] 06:48

3 [REDACTED], that substring is part of a 06:48

4 name of a Boolean field in [REDACTED] logs that I have 06:48

5 already testified about. And that binary field is using 06:48

6 X-Client-Data header information to proxy incognito 06:48

7 states. It is not an accurate name for the binary 06:48

8 field, and it is not used in UMA logs. 06:49

9 Q. Okay. I think I am -- very close. Just want 06:49

10 to make sure. 06:49

11 Does the [REDACTED] 06:49

12 [REDACTED] bit exist in 06:49

13 non-[REDACTED] logs? 06:49

14 A. To the best of my knowledge, that is the only 06:49

15 place it exists. If you -- this particular binary field 06:49

16 was developed with -- in -- as part of the design doc 06:50

17 that we reviewed earlier so that the [REDACTED] team could 06:50

18 look at how often they don't get a location header when 06:50

19 they're expecting to get a location header using the 06:50

20 presence -- or using the presence of the X-Client -- 06:50

21 presence or absence of the X-Client-Data header as a 06:50

22 proxy here for situations when you would or wouldn't 06:50

23 expect to get a location header. 06:50

24 Q. I understand that. 06:50

25 A. And that is the only way it is being used, to 06:50

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CONFIDENTIAL

1 my knowledge. 06:50

2 Q. And what is the basis of your knowledge for -- 06:50

3 what's the basis of your knowledge for that conclusion? 06:50

4 A. A few different things. 06:51

5 Talking to Quentin Fiard who was involved in 06:51

6 actually implementing this field. 06:51

7 Looking in code search, including historical 06:51

8 code search, for where this field is set and used. 06:51

9 And also if you look in the protocol buffer 06:51

10 that has this field, there is an annotation saying that 06:51

11 it is specifically only used in [REDACTED] logs. 06:51

12 And that there's also a comment that links to 06:51

13 the design doc that we talked about earlier that is 06:51

14 related to this field. 06:51

15 Q. And that comment is on an internal document at 06:51

16 Google? 06:51

17 A. It is a source code comment. 06:51

18 Q. Okay. 06:52

19 A. Not a document comment. And it is a comment 06:52

20 directly above the definition of this field. 06:52

21 MR. MCGEE: Okay. I don't have any further 06:52

22 questions. 06:52

23 Thank you. 06:52

24 MR. ANSORGE: We'd like to take a break to see 06:52

25 if we have any questions. 06:52

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CONFIDENTIAL

REPORTER'S CERTIFICATE

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STATE OF CALIFORNIA)
) ss.

COUNTY OF YOLO)

I, KATY E. SCHMIDT, a Certified Shorthand
Reporter in and for the State of California, duly
commissioned and a disinterested person, certify:

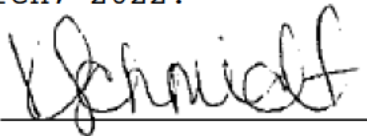
That the foregoing deposition was taken before me
at the time and place herein set forth;

That DR. CAITLIN SADOWSKI, the deponent herein,
was put on oath by me;

That the testimony of the witness and all
objections made at the time of the examination were
recorded stenographically by me to the best of my
ability and thereafter transcribed into typewriting;

That the foregoing deposition is a record of the
testimony of the examination.

IN WITNESS WHEREOF, I subscribe my name on this
11th day of March. 2022.



Katy E. Schmidt, RPR, RMR, CRR, CSR 13096
Certified Shorthand Reporter
in and for the
County of Sacramento,
State of California

Ref. No. 5130524 KES

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EXHIBIT 47
Unredacted Version of
Document Sought to
be Sealed

CHASOM BROWN, ET AL. vs GOOGLE, LLC, ET AL.
Hearing on 03/23/2022

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UNITED STATES DISTRICT COURT

3

NORTHERN DISTRICT OF CALIFORNIA

4

CASE NO.: 4:20-03664-YGR-AVK

5

6 CHASOM BROWN, MARIA NGUYEN and

7 WILLIAM BYATT, individually and on

8 Behalf of all other similarly situated,

9

Plaintiffs,

10 v.

11 GOOGLE, LLC and ALPHABET, INC.,

12

Defendants.

13

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15

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HEARING

17

18

19

HEARING BEFORE: Special Master Douglas Brush

20

DATE TAKEN: Wednesday, March 23rd, 2022

21

TIME: Unknown

22

TAKEN: Remotely via Zoom

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25

TRANSCRIBED BY: KIMBERLY H. NOLAN

CHASOM BROWN, ET AL. vs GOOGLE, LLC, ET AL.
Hearing on 03/23/2022

Page 2

1 A P P E A R A N C E S

2

3 For the Plaintiffs:

4 MARK C. MAO, ESQUIRE

5 Boies, Schiller & Flexner, LLP

6 44 Montgomery Street, 41st Floor

7 San Francisco, California 94104

8 415.293.6800

9

10 For Defendant Google, LLC:

11 ANDREW H. SCHAPIRO, ESQUIRE

12 Quinn, Emanuel, Urquhart & Sullivan, LLP

13 191 North Wacker Drive, Suite 2700

14 Chicago, Illinois 60606

15 312.705.7403

16

17 For Defendant Google, LLC:

18 JOSEF ANSORGE, ESQUIRE

19 Quinn, Emanuel, Urquhart & Sullivan, LLP

20 1300 L Street Northwest, Suite 900

21 Washington, D.C. 20005

22 202.538.8000

23

24 Also Present:

25 Tracy Gao, Law Clerk at Quinn, Emanuel, Urquhart & Sullivan

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Hearing on 03/23/2022

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1 when proceeding with the proto as a unit of analysis, or
2 maybe even the field as a unit of analysis, is it's still
3 tied to a very specific log source in this case.

4 So, there are specific [REDACTED] logs that we've
5 disclosed to you that have the field that's written, that
6 actually have that value. If that's a search you're
7 requesting, we can figure out whether those entail publisher
8 data.

9 But I want to clarify that because something is in
10 a proto, that does not mean it's in every log that uses that
11 proto. The proto is a list of all potential things that
12 could be filled in.

13 A lot of those are access-restricted, can only be
14 filled in by specific logs, and it's for that reason that in
15 our preservation proposal what we have tried to do is move
16 from the log level of analysis into the field level, where
17 if we agree these are the key fields that you're interested
18 in, we will work to figure out what is the longest period of
19 log where that exists.

20 That's separate from us changing the preserved --
21 preservation for entire log infrastructures, and I think
22 it's the most efficient way for us to proceed.

23 MR. MAO: But that field is already in [REDACTED] of
24 the logs in which -- in [REDACTED] of the [REDACTED] Young logs --
25 right? -- and that's on the ad side, that's not on the

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1 [REDACTED] side. In my understanding from Dr. Sadowski's
2 deposition, that field had been constructed and had existed
3 ever since [REDACTED]

4 MR. ANSORGE: And, so, because a field is seen in
5 a proto and the log uses that proto, that does not mean that
6 that particular field has a value.

7 The default will be false for values, and you're
8 going to find that -- you know, it -- UMA uses a GWIS proto
9 for parts of its infrastructure. That doesn't mean that it
10 has that field written into it.

11 So, it's a -- if we need to search for information
12 related to that specific field, the special master thinks
13 that's, you know, proportional and appropriate for us to
14 proceed, I think we would -- could only do it in the
15 specific [REDACTED] logs, except if you're just looking for some
16 kind of description of the field infrastructure overall.

17 But the overall point I'm trying to make is that
18 the level of analysis -- and this is what I tried to argue
19 at our in-person hearing, too, and I'm sorry if I wasn't
20 effective in communicating it -- but I think the most
21 efficient and effective level of analysis for us is the
22 actual field and not the log infrastructure as we're
23 discussing the preservation plan, because we very quickly
24 find ourselves in a scenario where -- right? -- each log
25 will have standard preservation periods, each field will

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1 have different ones.

2 But what we really need to be focused on are these
3 are the fields Plaintiffs care about, that they know about,
4 that they're focused on, that are in their complaint, and
5 for those we can figure out preservation proposals, and
6 that's what we tried to do in the proposal that we sent you.

7 MR. MAO: And I'm not trying to lock you down
8 on the logic or the structure -- right? -- I'm literally
9 saying that for the logs you have identified as part of the
10 special master process, one, what logs actually include that
11 field, whether at a proto level or at the actual log level,
12 and then, two, which of those logs actually has that
13 specific field filled. I realize that there may be --

14 SPECIAL MASTER BRUSH: (Interposing) Well, there's
15 one nuance -- you're so close. I think there's one nuance.
16 The problem is which logs have the capability for that
17 proto, because, again, I think what Mr. Ansorge is saying is
18 like just because it can doesn't mean it does exist, and
19 that's where there's this kind of ephemeral thing. And, so,
20 that map -- and so -- and, honestly, I mean -- and maybe --
21 I don't know what that is, so I'm gonna kick it back to Mr.
22 Ansorge on what that is. No.

23 Is that even a doable thing to say, okay, with the
24 logs that have been identified as part of this process,
25 which ones could have -- could potentially have that field

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1 MR. ANSORGE: Okay. Well, in that case I
2 (inaudible) --

3 MR. MAO: (Interposing) I'm not saying that
4 she said under oath that she needs to go back to talk to
5 engineers to figure that out.

6 MR. ANSORGE: Well, then I think -- I would like
7 you to send us that specific quote and passage where she
8 said that she's not -- is not providing an answer.

9 Not only did she identify the specific log sources,
10 we put them on a piece of paper for you so that there'd be
11 no typo, so there'd be absolute clarity on which exist.

12 She explained when they were written and she
13 explained, most importantly, the logic by which they were
14 written, and that logic is one that we have discussed ad
15 infinitum, both before the special master and in other
16 processes, at least since July.

17 There's been 30(b)(b) corporate testimony about the
18 false positives, false negatives associated with the absence
19 of the "X" Klein data header.

20 MR. MAO: Well, look, we're not arguing the
21 merits of the case right now, we're simply trying to isolate
22 the data, the relevant data. Right?

23 My point is this popped up in the schema for [REDACTED] of
24 the [REDACTED] logs, and I'm simply asking you whether or not
25 you need to update the rest of the logs to either reflect

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1 that's similarly in there -- okay? -- or that it could be in
2 there, or something else. Like you've given no explanation
3 or logic to that.

4 And by the way, Dr. Sadowski's deposition,
5 actually, the incongruence is that she didn't point to
6 either of those [REDACTED] logs which ended up showing that field.

7 So how do I reconcile you saying that this field --
8 that the logs -- the [REDACTED] logs she identified is exhaustive
9 when she didn't even list the [REDACTED] additional logs that was
10 produced as part of the special master process which did use
11 that field?

12 MR. ANSORGE: Yeah.

13 MR. MAO: How do I reconcile that?

14 MR. ANSORGE: I think you reconcile that by
15 understanding what we've been trying to explain about protos
16 since October.

17 MS. GAO: Mr. Mao, let me try to explain this.
18 So, [REDACTED] of the [REDACTED] logs, as you see, have this field, but
19 they will always be written as false because that's the
20 default written -- default writing of these logs, because
21 they don't really have the capability to write in the logs.

22 So, even if you select the sources and we run the
23 searches, all of the results you will see will be false.

24 MR. MAO: So, I think you're wrong there, Ms.
25 Gao, because I think you used the word "capability," and

CHASOM BROWN, ET AL. vs GOOGLE, LLC, ET AL.
Hearing on 03/23/2022**Page 49**

1 that's not true. I mean, it clearly has the capability to
2 do that. And the two questions are, one --

3 SPECIAL MASTER BRUSH: Well, let me pause you right
4 there, Mr. Mao, because I think there's a slight -- it's not
5 a universal capability to try to report it on, it's not --
6 even the option's not (blip) in every data source. You
7 know, there's a nuance there.

8 MR. MAO: Right. And, Mr. Brush --

9 SPECIAL MASTER BRUSH: So, what -- I guess let's
10 close this out, because we're at time. So --
11 (Speaking simultaneously)

12 MR. MAO: I'm just trying to figure that out,
13 Mr. Brush.

14 SPECIAL MASTER BRUSH: No, no, no. I understand
15 that.

16 MR. MAO: Exactly what (inaudible).

17 SPECIAL MASTER BRUSH: Yeah. It sounds like there
18 was a lot of information that was provided around this
19 topic, and if there's gaps, by all means.

20 I mean, I'm not saying we don't, but you're not
21 being -- we're not being very productive here getting to the
22 bottom of that.

23 But, you know, are you asking -- and can we do this
24 as kind of an approach -- out of the additional -- out of
25 all the identified logs in the process, is it -- what would

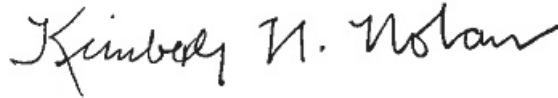
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CERTIFICATION PAGE

I, Kimberly H. Nolan, Transcriptionist,
do hereby certify that this transcript
is a true and accurate record of the
electronically recorded proceedings,
transcribed by me this 1st day of
April, 2022.



KIMBERLY H. NOLAN

EXHIBIT 49

Redacted Version of Document Sought to be Sealed

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

- - -

CHASOM BROWN, WILLIAM	:	Case No.
BYATT, JEREMY DAVIS,	:	
CHRISTOPHER CASTILLO	:	5:20-cv-03664-
and MONIQUE TRUJILLO,	:	LHK
individually and	:	
on behalf of all other	:	
similarly situated,	:	CONFIDENTIAL
	:	
Plaintiffs,	:	
	:	
	:	
v.	:	
GOOGLE, LLC,	:	
	:	
Defendant.	:	

- - -

Wednesday, June 16, 2021

- - -

Videotaped 30(b)(6) deposition of
GLENN BERNTSON held pursuant to notice,
beginning at 10:27 AM, on the above date,
and recorded stenographically by
Constance S. Kent, a Certified Court
Reporter, Registered Professional
Reporter and Notary Public.

* * *

MAGNA LEGAL SERVICES
(866) 624-6221
www.MagnaLS.com

1 A P P E A R A N C E S:

2 BOIES SCHILLER FLEXNER LLP
3 BY: MARK C. MAO, ESQ.
4 BEKO REBLITZ-RICHARDSON, ESQ.
5 44 Montgomery Street, 41st Floor
6 San Francisco, California 94104
7 (415) 293-6800
8 mmao@bsfllp.com
9 brichardson@bsfllp.com
10 Attorneys for Plaintiffs

11 BOIES SCHILLER FLEXNER LLP
12 BY: ROSSANA BAEZA, ESQ.
13 (pro hac vice)
14 100 SE 2nd Street, 28th Floor
15 Miami, Florida 33131
16 (305) 539-8400
17 rbaeza@bsfllp.com
18 Attorney for Plaintiffs

19 MORGAN & MORGAN
20 BY: RYAN McGEE, ESQ.
21 201 N. Franklin Street, 7th Floor
22 Tampa, Florida 33602
23 (813) 223-5505
24 rmcgee@forthepeople.com
Attorney for the Plaintiff

 SUSMAN GODFREY L.L.P
 BY: ALEXANDER FRAWLEY, ESQ.
 1900 Avenue of the Stars, Suite 1400
 Los Angeles, California 90067
 (310) 789-3100
 afrawley@susmangodfrey.com
 Attorneys for Plaintiffs

1 APPEARANCES, continued
2 QUINN EMANUEL URQUHART & SULLIVAN,
3 LLP
4 BY: STEPHEN BROOME, ESQUIRE
5 JOSEF ANSORGE, ESQUIRE
6 1300 I Street, NW, Suite 900
7 Washington, D.C. 20005
8 (202) 538.8000
9 stephenbroome@quinnemanuel.com
10 josefansorge@quinnemanuel.com
11 Counsel for Defendants
12
13 ALSO PRESENT:
14
15 Matthew Gubiotti, Esquire
16 In-house counsel for Google
17
18 Jay Bhatia
19
20 Chris Thompson, 233 Analytics, LLC
21
22 Adam Depew, Video Specialist
23
24 Noah Fox, Trial Technician

1 rights for what?

2 MR. MAO: I'm reserving my
3 rights to ask additional questions
4 of a witness that's properly
5 prepared to testify to the topics,
6 including the topics which the
7 court had actually ordered.

8 MR. BROOME: Okay. But you
9 don't have any more questions for
10 Mr. Berntson?

11 MR. MAO: Disagree. I don't
12 know.

13 MR. BROOME: You don't know
14 if you have any more questions for
15 him?

16 MR. MAO: Steve, stop
17 burning my time.

18 MR. BROOME: Do you have any
19 more questions for Mr. Berntson?

20 MR. MAO: I'm pausing my
21 portion.

22 MR. BROOME: Okay. I'm
23 going to take that as a no.
24 Did -- can I -- can I ask my

1 questions now? I'm going to take
2 your silence, your non-response as
3 a yes.

4 - - -

5 E X A M I N A T I O N

6 - - -

7 BY MR. BROOME:

8 Q. Mr. Berntson, do you recall
9 that Mr. Mao asked you some questions
10 today about Google mapping Biscotti IDs
11 and [REDACTED] and conversion
12 tracking?

13 A. Yes.

14 Q. And I believe you testified
15 that mapping in [REDACTED] requires a
16 Gaia ID; is that -- is that right?

17 A. That is correct.

18 Q. For the dataflow that's at
19 issue in this case where users are on
20 their browsers, they're signed out of
21 their Google accounts, they're in private
22 browsing mode, would there be any mapping
23 from Gaia to Biscotti?

24 A. No, because when you go into

1 private browsing mode, you start off with
2 a completely empty cookie jar. A
3 Biscotti is created, and if you don't
4 sign in to Google, there's no Gaia to map
5 that new Biscotti to. The Biscotti that
6 is present on the non-incognito browser
7 instance is not shared with the incognito
8 browser instance so there's no way of
9 creating that mapping from an incognito
10 session.

11 Q. Okay. And -- and conversely
12 would there be any mapping from Biscotti
13 to Gaia under those same conditions?

14 A. No. Again for similar
15 reasons, there is no Gaia to map that
16 Biscotti to.

17 Q. Mr. Mao asked -- also asked
18 you a number of questions about the
19 X-Client-Data header.

20 Do you recall that?

21 A. Yes.

22 Q. Do you understand that the
23 plaintiffs in this case have proposed
24 that Google could use the [REDACTED] [REDACTED] [REDACTED]

1 [REDACTED] [REDACTED] [REDACTED] [REDACTED]

2 [REDACTED] [REDACTED] [REDACTED] [REDACTED] ?

3 A. Yes.

4 Q. And does Google use the

5 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

6 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] ?

7 A. [REDACTED]

8 Q. [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

9 [REDACTED] [REDACTED] [REDACTED] [REDACTED]

10 [REDACTED] [REDACTED] [REDACTED]

11 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

12 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

13 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

14 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

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CERTIFICATE

I HEREBY CERTIFY that the witness was duly sworn by me and that the within deposition is a true and accurate transcript of the stenographic notes of the testimony given by the witness.

It was requested before completion of the deposition that the witness, GLENN BERNTSON, have the opportunity to read and sign the deposition transcript.

Corr R
Cer
Registered Professional Reporter
Certified LiveNote Reporter
and Notary Public
Dated: June 20, 2021



(The foregoing certification of this transcript does not apply to any reproduction of the same by any means, unless under the direct control and/or supervision of the certifying reporter.)

EXHIBIT 50
Redacted in its
Entirety